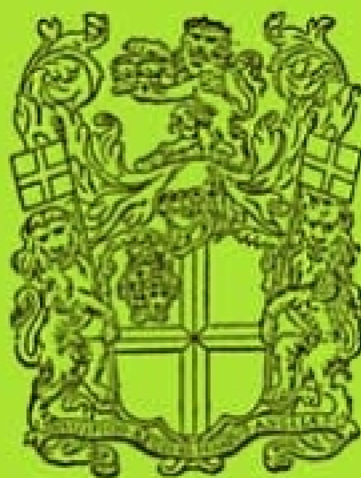
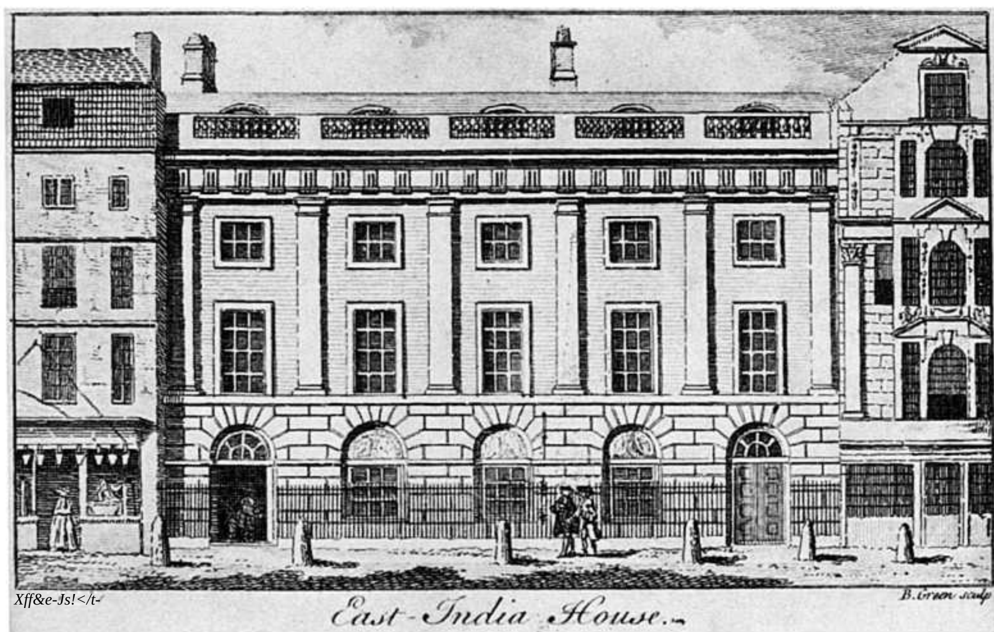
THE TRADING WORLD OF ASIA AND THE ENGLISH EAST INDIA COMPANY 1660–1760





K. N. CHAUDHURI

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1660-1760



The East India House, Leadenhall Street, after the rebuilding of 1729

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ABBREVIATIONS

B.M.	British Museum
Kol. Arch.	Koloniaal Archief, Algemeen Rijksarchief, The Hague
P.R.O.	Public Records Office
V.O.C.	Vereenigde Oost-Indische Compagnie

NOTES ON DATES, CONTEMPORANEOUS SPELLINGS, CURRENCY, AND WEIGHTS

The dates in this book are all based on the Old Style calendar, which differs from the Gregorian calendar by being 11 days behind. But modern convention has been followed in writing the years, i.e. the New Year begins on 1 January and not on 1 April.

Contemporaneous spellings are preserved in quotations of original passages, except in cases where these are so different from modern usage as to be likely to cause a confusion of meaning.

Currency conversion factors followed by the East India Company

1660-76	1 rupee = 2s 6d
1676-1705	1 rupee = 2S3d
1706-61	1 rupee = 2s6d
1660-77	1 pagoda = 8s
1678-1736	1 pagoda = 9s
1737-6i	1 pagoda = 8s
	1 tale (Chinese weight) of silver = 6s 8d
	121 Mokha dollars = 100 Spanish dollars
	1 Spanish dollar = 5s

Weights

i Bengal maund = 75 lb
1 Surat maund = 28 lb
1 Surat candy = 6 cwt
1 Madras candy =4.37 cwt
1 garce (Madras weight) = 400 mercals
= 12.8 Bengal maunds
1 Mokha bahar = 450 lb
1 Beit el-Fakih bahar = 8141b
ipicul = 133-5 lb
1 great (English) lb = 24 oz

Mote: For a fuller description of the currency and weights and metric conversions, see Appendix 1.

PREFACE

For the economic historian the archives of the English East India Company provide one of the most comprehensive sources of information for the reconstruction of the commercial history of Europe and Asia in the pre-modern age. The Company's officials, both in London and in the East Indies, were prolific writers of letters, memoranda, and diaries. These qualitative records contain almost all the secret deliberations of the decision-makers, and their inner considerations on commercial and other matters illuminate the entire economic and political environment in which the Company operated at home and in Asian countries. When the English historical sources are supplemented by the comparable material in the archives of the Dutch organisation, the Vereenigde Oost-Indische Compagnie, the result is the creation of a gigantic repository of knowledge on the European expansion in Asia during the seventeenth and eighteenth centuries. The survival of the East India Company's account books also enables us to undertake a complete quantitative analysis of its activities and to build up long time-series on the total volume and value of trade, prices of goods, fluctuations in currency values, prices of gold and silver, transport costs, and many other economic variables. But in a way the vast scale of the Company's operations and the weight of documentation have so far been a deterrent rather than a positive gift to the historians in analysing its pre-territorial activities. In spite of the obvious importance of the subject, there is no single work that deals with the whole history of the Company during the period from 1660 to 1760. The last attempt to provide such an account was made by Sir William Hunter in 1899 when he published his incomplete *History of British India* which took the story only up to 1709. The efforts of John Bruce, the Company's official historiographer, had been no more successful, and his *Annals of the East India Company* published in three volumes in 1810 was only a summary of the material in the Company's Despatch Books up to 1709.

The emphasis in the present work is equally divided between a reconstruction of the Company's own particular history for the period from 1660 to 1760 and an analytical treatment of the economic life of those countries in Asia where the Company had established trading relations. Behind these two objectives there is yet a third aim, to try

to discover through the records and activities of the East India Company the general problems of long-distance trade in pre-Industrial Revolution societies. The examination of these problems leads us directly into the complex world of decision-making under uncertainty, methods of economic forecasting, the organisation of an operational system, and the determination of an acceptable level of commercial profitability. Early modern trade was by no means an exercise in guesswork. The quantitative evidence generated by the Company's long period of continuous trading allows us both to see the kind of problem that could arise in relating planning to execution and to examine the methods adopted by the Company to ensure the stability of its trading system. The methodology followed in the book differs from the conventional treatment of historical material, although a great deal of the exposition necessarily relies on descriptive techniques supported by direct quotations. The decision to make use of the electronic computer for data-processing made it necessary at an early stage of research to construct some sort of overall plan. The methods of systems analysis and the explicit formulation of a decision and operational model seemed to me to be best suited for approaching both the tasks of collecting the data and their subsequent analysis. To fellow historians who find the terminology of the systems theory and its application no more than an obfuscation, I owe an advance apology and I can only hope that time will soften today's outrages and make them tomorrow's orthodoxy.

The research on which the work is based extended over nearly ten years. I began to work systematically on the records from January 1968, and the preliminary version of the book was completed in the summer of 1975. Since then it has undergone two successive revisions. The original version was nearly a third longer than the present one, and the current conditions in publishing have made it necessary to prune out a great deal of the illustrative historical material. Similarly, I was unable to utilise the voluminous notes that I had collected on the Company's shipping, shipwrecks, and private European trade in Asia for lack of space. Out of the 400 tables originally produced by the computer, we are able to print only the most important ones. The burden of assimilating and reorganising the vast body of material was heavy, but it was made lighter to some extent by the challenge of applying new analytical techniques. In the preface to his great book *The Mediterranean and the Mediterranean world in the age of Philip II,* Fernand Braudel remarked that the disadvantage of overlong projects is that one can sometimes enjoy the journey too much ever to reach the end. I read these lines quite by chance one evening while on holiday in Mediterranean Spain. As the sunlight faded over the Bay of Rosas and the dark shadows of the great mountains of the Pyrenees fell on the

ruined Graeco-Roman city of Ampurias, open to view, I reflected on these words of another historian on his own past labours and thought of the long and memorable road that lay behind me and of the work that was still to be done. For the discovery of new facts is always more exciting than the laborious task of putting them together. For me the excitement was made more intense by the suspense of having to work with computer technology. The collection and the transformation of the quantitative data into machine-readable form took many years. During this time I had only a dim picture of the overall framework. In the event, the computer required no more than a few minutes to present the final results. The data which lie buried in millions of accounting entries in over 400 volumes, which took 100 years to accumulate, and more than five years to reorder, were made available to us in a tabular form within a day. The magnitude of the machine's achievement can be realised by remembering that the knowledge which we possess now on the Company's trading operations was not available to the participants at the time.

Many institutions and individuals have contributed to the completion of the book. It gives me great pleasure to record my thanks to the Social Science Research Council, which by awarding a research grant made computerisation of the data possible. My own college, the School of Oriental and African Studies, University of London, has always been generous in providing equipment and material help. Without the resources of its library and those of the Goldsmiths' Library of Economic Literature, University of London, the task of writing the book would have been much harder. The primary research was conducted in many archives, at the India Office Records, Algemeen Rijksarchief, The Hague, Stadsarchief, Antwerp, and Archives Nationales, Paris; my thanks are due to their staff. I am specially indebted to Professor D. C. Coleman and Dr W. J. Macpherson, both of whom read the first draft of the work. Their comments and criticisms have been invaluable in its subsequent revisions. I have also greatly benefited from the discussions and many conversations I have had over the years with Dr P. J. Marshall and my thanks are due to him for his kindly interest in the book and in seeing it published. My friend and colleague Dr Peter Hardy has generously translated for me Persian inscriptions on contemporaneous coins and provided me with bibliographical assistance at short notice. I am indebted to Professor Philip Grierson for bringing to my notice a number of reference works on numismatics. I should also like to thank Miss J. L. Skegg for assisting me with the collection of the quantitative data and writing the computer programs. My research was paralleled by the work of Dr J. D. Nichol on the foundation of British political power in Bengal during the middle decades of the eighteenth century; I must thank him for illuminating

many obscure points with his great knowledge of the political events of the period. Finally, I record with pleasure the encouragement I received in my quantitative work from Dr M. M. Islam, Dr John McGuire, and Dr Marika Vicziany. Their enthusiasm for computerised research relieved the solitude of ploughing the furrow all by myself.

London, May 1977 K.N.G.

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K.N.C.

I

THE INTERNATIONAL ECONOMY AND THE EAST INDIA TRADE

The nature and structure of international trade between Europe and Asia

The history of European trade with Asia long pre-dates the discovery of the Gape route. But the Portuguese claim for an exclusive right to the new route, which swiftly followed the circumnavigation of the Cape of Good Hope, gave it an entirely new character. The participation of the countries of North Atlantic Europe in this trade from the beginning of the seventeenth century in turn changed its structure from what it had been under the control of the Portuguese. The spectacular increase in the volume of East India trade achieved by the Dutch and English was to leave a profound impact on the contemporaneous economic consciousness and give rise to a vigorous controversy about the effects of the Asian trade and the manner of its organisation. By the time our period ends in 1760 the military conquest of Bengal by the English East India Company was well under way. The memory of the Mughal court splendours, and the power and glory of the great Islamic Empire in the subcontinent, were rapidly receding into a dimly remembered past. In the third quarter of the eighteenth century, it was impossible for any sensitive and observant European to overlook the changes that had taken place in the trade, the pace of economic growth, and the political balance of the Western world since the first age of maritime expansion. These developments were no doubt uppermost in the mind of Adam Smith when he stated in his famous chapter on colonies that 'the discovery of America and that of a passage to the East Indies by the Cape of Good Hope, are the two greatest and most important events recorded in the history of mankind'. * But to the liberal instincts of a Scotsman dedicated to the cause of economic justice, the gains and losses were not evenly shared by all the countries concerned. Although he refused to predict the future, Adam Smith had no hesitation in saying of the past: 'To the natives, however, both of the East and West Indies, all the commercial benefits which can have resulted from those events have been sunk and lost in the dreadful misfortunes which they have occasioned.[52] For the European nations the consequences of the intercontinental geographical discoveries were rather different. Their

main effects had been to 'raise the mercantile system to a degree of splendour and glory which it could never otherwise have attained to'. The object of that system was to promote economic growth through trade and industry, which received greater encouragement than agricultural improvement. The result of this development could also be seen in the industrial stimulus received by the urban centres of Europe, which became the suppliers of manufactured goods to the prosperous American colonists. In relation to Asia, Europeans were the sole carriers of its industrial products.[3]

Adam Smith was of course writing at a time when the corruption and political excesses of the East India Company's servants in Bengal were an acute issue in English party politics, and it was perhaps natural for him to draw a common link between the establishment of the British Empire in India and the Spanish conquests in America, even though these phenomena were separated by two centuries. Furthermore, it was a period which was beginning to witness a desire for economic change. Some of the most powerful arguments in *The Wealth of Nations* were precisely directed at the old patterns of colonial trade, based on preferential markets and exclusive navigation laws. But the question of the monopoly and the institutional arrangements of the extra-European trade were different from the fundamental problem of establishing its actual long-term impact on European economic development. For those who, like Adam Smith, believed in the benefits of greater freedom of trade, the extension of markets was of cardinal importance. By opening up vast areas of the New World to European industry, the trade to America made it possible to intensify the division of labour to an extent which the old intra-European trade could never have achieved. The discovery of the Cape route to the Indies created even greater potentials of market expansion. The author of *The Wealth of Nations* was perfectly aware of the qualitative difference between relatively empty regions of the New World and the densely populated areas of India or China, supporting a higher volume of trade and industry. If the effects of the East India trade were not as expansionary as those of the American trade on Europe, it was because of the restrictive influence of the monopolistic chartered companies.[4] Even so, the rise of Western trade with Asia, Adam Smith believed, had given a new dimension to economic activities on a world scale.

It is not difficult to see the reason for this general emphasis on international trade as an instrument of growth in Adam Smith's economic thinking.[5] In a society dominated by a static or slowly developing technology, it is natural to look on trade as the main avenue for increasing individual or national wealth.[6] Although it was not until the early nineteenth century that David Ricardo's theory of comparative costs was able to suggest a rigorous theoretical explanation for inter-

national trading, the practical experience of men had long discovered the gains that could be made from economic exchange with given production techniques. But in a country on the brink of a major technological break-through, as England was during Adam Smith's lifetime, the extension of markets through trade could also be interpreted as a crucial endogenous factor in improving productivity and total production. Of course the validity of these assertions must be checked against historical evidence. During the seventeenth and eighteenth centuries English overseas trade underwent significant changes in its composition, direction, and volume.[7] It may rightly be asked how it was possible for England to expand at a rapid rate the import of a whole new range of commodities - tobacco, sugar, Indian cotton textiles, raw silk, coffee, and tea - between 1600 and 1750. The question may indeed be posed for the whole of Europe in relation to her trade with the rest of the world in the same period. It is possible to suggest a hypothetical answer. Just as the geographical discoveries of the sixteenth century paved the way for new sources of supplies in America and Asia, so there must have been a corresponding increase in demand on the part of European people. This again could only be sustained if there was a continued rise in real income brought about by either technological improvements or a more efficient use of resources. But the analysis required the pre-condition of an initial mechanism which would start up the system on its path of growth. For that we can probably look to the working of the American silver mines and the tremendous impact on world trade of the influx of newly mined precious metals.[8] It may seem paradoxical that an increase in economic activities and the productive employment of surplus resources at a global level should have to await an expansion in money supply which itself occurred first as an autonomous factor. However, as long as gold and silver were regarded as universal standards of value and considered essential for the settlement of international balance of indebtedness, there was no escape from this inexorable logic. The central role played by American treasure and the rising level of monetary liquidity in the development of extra-European trade is not really open to challenge, though the relationship between these two factors and the overall economy of the Western nations is at once more obscure and speculative.[9]

It is also important to bear in mind the dynamics of our model. The historical events it seeks to explain extended over the best part of two centuries. The Portuguese maritime empire in the Indian Ocean had taken on a distinct shape and cohesion between 1500 and 1520. But it was not until the third decade of the century that silver from the mines of Mexico and Peru began to reach the Iberian peninsula in large quantities.[10] The metal was certainly exported to India by the Portu-

guese to buy pepper for the European market. However, in many important respects the Lusitanian commercial policy in Asia fell short of the precise attributes of commercial capitalism which some historians see as the dominant characteristic of European economic institutions preceding the Industrial Revolution.[11] When the news of the Portuguese successes in the western coast of India reached Venice, the merchant banker Gerolamo Priuli wrote in his diary that the Portuguese would now be able to undersell the Venetians in the spice trade, because he expected the Cape route to be cheaper than the overland caravan route.[12] This did not happen; instead the Portuguese spice trade was turned into a Crown monopoly, retaining the character of a redistributive enterprise living off the profits derived from a politically controlled trade.[13] Even Adam Smith was careful enough to point out that the colonial trade of Spain and Portugal, large as it was, gave more real encouragement to the industry of other countries - France, Flanders, Holland, and Germany - than to that of Spain and Portugal. It was only the intermediate profits of that trade which remained in the two countries, helping to support 'the sumptuous profusion of the merchants of Cadiz and Lisbon'.[14]

In the early eighteenth century, there was at least one Spanish economic expert who came to the conclusion that, while Spain mined the American treasure, the actual benefits were reaped by other countries. What had happened, he asked, to the thousands of millions of dollars that, since the discovery of the Indies, had been transported to the continent of Spain, where there now remained little more than some copper or brass money?[15] The relative economic failure of Spain was attributed by Uztariz to the injurious effects of Spanish trade with other nations. With the astonishingly successful example of Holland before their eyes, it was not difficult for the Spaniards to see which particular European country had gained and accumulated real capital.[16] The commercial and financial supremacy of Amsterdam during this period was beyond anyone's doubt. The Dutch were the unquestioned masters of the European bullion trade. The bankers of Amsterdam could issue bills of exchange on Cadiz and Lisbon, in quantities which the London of William III found hard to rival. Much of the Mediterranean and the Baltic trade was carried in Dutch shipping. But can we explain the economic progress of the Netherlands during the seventeenth century on the grounds of successful adoption and working of commercial capitalism, and if so, what was the connection between this larger development and the rise of Dutch East India trade ? In the minds of contemporary English pamphleteers and writers on economic matters there was little doubt that the United Republic had one of the most unfettered commercial systems of the time, which enabled its merchants and economic decision-makers fully

to utilise existing and new opportunities in trade. 'The prodigious increase of the Netherlander,' Sir Josia Child remarked in his *A New Discourse of Trade* (1693), 'in their domestick and foreign trade, riches, and multitude of shipping, is the envy of the present, and may be the wonder of all future generations. And yet the means whereby they have thus advanced themselves are . . . imitable by most other nations but more easily by us of this kingdom of England.'[17] The reasons for Dutch economic success were obvious to Child and were listed by him systematically. At the top of the list was the fact that Dutch Councils of State, the law-making bodies, were composed of trading merchants who had lived abroad most of their lives and who had great practical and theoretical knowledge of commercial matters. Consequently, their laws and foreign policy were framed in such a way as to give a positive advantage to trade. Among other factors mentioned by Child were Dutch honesty in weights and measures, their propensity to risk-taking and encouragement of innovation in industry and trade, liberal fiscal regulations, and above all the immense advantage of their banks and financial institutions.[18]

The foundation of Dutch commercial prosperity, as a modern study has pointed out, rested on a world-wide carrying trade and a massive concentration of marketing and stapling functions in Amsterdam.[19] The biggest profits were made by the Dutch from their ability to import and redistribute a wide variety of goods throughout the markets of Europe and Asia. It was this aspect of their activities which makes the Dutch economic institutions of the seventeenth century particularly suitable for an analytical treatment developed in terms of the concept of commercial capitalism. One of the necessary conditions of this analysis is the notion that in pre-modern capitalism there is a separation of functions between merchants and industrial producers. The artisan may own his few simple tools and even a certain amount of working capital, but he is not able to market his products without the help of middlemen. In such circumstances it becomes easy for traders and merchants to acquire control over the production process and its profits. The accumulation of capital in the hands of this class of men ensures that the system becomes self-perpetuating.[20] It can be seen that the critical assumption behind the theory of commercial capitalism is that of a vital connection between productive activities and trade which acts like a regulating mechanism. It can be argued that the commercial freedom and expertise possessed by Dutch merchants enabled them to make high profits and concentrate capital, which provided further investments for an expansion of trade. The ultimate result was not only a general enrichment of Holland but also a net rise in world-wide economic activities. The argument applies with particular force to the growth of Dutch trade in Asia. The keen observation of Adam

Smith did not fail to notice that the commercial system of Holland generated an immense volume of loanable funds which were continually seeking profitable outlets in investments. 'AH near employments being completely filled up, all the capital which can be placed in them with any tolerable profit being already placed in them, the capital of Holland necessarily flows towards the most distant employments.'[21] He concluded that if the trade to the East Indies was left open instead of being conducted through a monopoly company, it would probably absorb the great part of Dutch surplus capital.

There is ample evidence that the organisation of Dutch and English trade to the East Indies at the beginning of the seventeenth century was far from being a chance, unplanned affair. The governing body of the United East India Company of the Netherlands possessed from its early days a collective strength of purpose, a financial and political ideology, that was an object of admiration from the Company's English counterpart.[22] When the group of London merchants who were to promote the first English voyage to the East Indies petitioned the Privy Council for formal permission, they stated officially that the recent Dutch success in reaching the spice markets of Asia had stirred them up 'with no less affection to advance the trade of their native country than the Dutch merchants were to benefit their Commonwealth'.[23] With the deepening experience of Asian trade, both the Dutch and English learnt that the American silver was indispensable for its full development, and in contemporaneous economic literature Spain appeared as the universal fountain-head through which the precious metals of the New World were distributed throughout Asia. In the seventeenth century, the two separate developments, the expansion of Europe westward to the American continents and the establishment of commercial relations with countries around the Indian Ocean, fused together under new leadership to form a powerful force in the integration of world economic exchanges. The Asian trade of the north European trading companies incorporated a far greater spirit of competitive commercialism than was the case with the Portuguese. But a word of caution is necessary here. All large-scale historical movements contain elements of contradiction, and European trade with the Indies is no exception. Take for example the Dutch attempt to control the Spice Islands by force of arms. The monopoly which they came to acquire in the supply of finer spices was purely a case of redistributive trading. It was not only consumers in Europe who had to pay a high price for these products: the producers were also deprived of their share of profits through direct political control. A study of the United Company's constitution, structure, and policy may lead to the conclusion that it was more of a redistributive enterprise than a strict business organisation; but at the same time we know that Dutch trade in China,

India, and the Persian Gulf contained many elements of pure commercial transactions. From the point of view of its overall position in the economic and political system of the Netherlands, the Directors of the Company never overlooked the commercial foundations on which its existence and activities depended.[24]

There was certainly an observable connection between the rise of Dutch commercial supremacy and the European economic expansion during the two centuries from 1550 to 1750, which was strengthened by the growth in English overseas trade. But we have to recognise that the organisation of the East India trade occupied a hybrid position, halfway between the Portuguese crown monopoly and the royal practice of assigning farming rights and the highly competitive structure of Dutch and English trade in the home markets. The Asian trade, however, can be seen as a case of commercial capitalism. The industrial producers of India, for example, along with the agricultural workers growing cash crops had long relied on merchants and traders to finance and distribute their products. They were now drawn into an ever-extending circle of market area through the intermediary of the European East India Companies, which supplied the working capital. The products of Indian land and labour, raw cotton converted into finished cloth, ended up in the slave plantations of America and the West Indies, producing tobacco and sugar for Europe, just as the silver *reales* struck in the mints of Mexico City, Lima, and Potosi found their way into all the major trading towns of India and China. The two ends of the international chain of economic links now stretched from Asia to the New World with Europe providing the main force of expansion. Here again, though, we should take note of an uneven chronology. The high tide of the import of American silver into Europe took place during the years from 1550 to 1630, but the real expansion of European trade with Asia did not begin until after this lattei date. If the impact of the newly discovered treasure was expansionary, it did not coincide with the full development of Asian commerce, for there were signs that the second half of the seventeenth century witnessed in many parts of Europe an increasing degree of economic dislocation and depression. And yet this was a period which saw a phenomenal increase in the volume of Dutch and English East India trade.

Quite clearly the economic movements and trends were neither linear nor in the same direction all the time. But they were not completely self-cancelling either, or there would have been a zero rate of change. In order to expand their Asian trade, the Dutch and English commercial systems needed an increasing stock of precious metals. This could be obtained in two ways, by reducing the domestic use of gold and silver for monetary purpose and by generating a surplus in the balance of payments. Again, the exact mechanism through which the

supply of treasure in general affected trade may be broken down into two complementary parts: a direct effect and an indirect one. The direct relationship is exemplified by the merchants' need to make payments for goods and services in specie, which is analogous to the transaction demand for money. Even when bills of exchange were used to settle international or interregional accounts, an equivalent amount of specie was necessary in the place where the final payments were to be made. With predominantly metallic currencies, the supply of money was outside the immediate control of merchants, and a scarcity or abundance of treasure directly influenced the liquidity of debtors and creditors, affecting the velocity of the entire commercial system. These variations in supply also operated on the monetary arrangement itself, because a relative change in the price of bullion and the official standard of coinage could cause a contraction or expansion in money supply through the flight of capital from one country to another. The indirect effect, on the other hand, was expressed in the impact of treasure (and therefore the quantity of money) on the price level and possibly interest rates. Price changes which resulted from a debasement (i.e. devaluation) of national currencies or recoinage (upward revaluation) could of course radically change, through exchange rate fluctuations, the profitability of a particular branch of foreign trade. Similar effects could also follow from the rise in the price level attributable to an increase in money supply. The critics of the English East India Company who argued that its policy of exporting precious metals was causing a contraction in money supply and therefore depressing the price of domestic manufactures were answered by the stereotyped reply that the Company's re-export trade far exceeded in value the amounts originally carried out in money. The point was emphasised in the general context of English balance of trade by the Committee of Trade in 1660, when it was mentioned that England had always managed to export a sufficient quantity of goods so as to create a trade surplus in the form of gold and silver reserves.[25]

In the 1660s English currency of course still retained its intrinsic metallic value. But by the turn of the century, in spite of the recoinage of 1696, the silver coinage had become so light that it was practically token currency. There were frequent complaints in the early eighteenth century from the East India Company's Committee of Treasure that silver bullion or foreign coins were difficult to obtain and that the price was much higher than the official mint price. But there were few references to a tightness of money supply and a real scarcity of capital. Interest rates had fallen from the high levels of the previous century and the East India Company could easily borrow large sums of money at 4 per cent. It seems that with the rapid development of financial institutions in this period an element of flexibility had been introduced into

the monetary system, and the banks were able to increase the money supply against deposits or by creating credits. The implication of this development, if true, is that the banks would temporarily allow their ratio of reserves to liability to fall, thus increasing the velocity of the circulating medium of exchange. It is true that English monetary experts always betrayed a profound anxiety about the debased condition of the national currency, but they could take comfort from the extreme example of Portugal where the scarcity of silver coins was so great in the 1720s that the Portuguese government coined only gold pieces and a great deal of copper money. Even so business transactions were often conducted by opening books of debtors and creditors, and the retail shopkeepers were in the practice of demanding exact change from their customers. Such difficulties in the management of the currency, as John Conduitt, the master of the English royal mint, pointed out (1730), would be insupportable in a nation that subsists by trade, carried on 'chiefly by multitudes of labourers and manufacturers'.[26]

The fears of the English East India Company about its ability to procure the necessary quantities of bullion for export to Asia were closely associated with the atmosphere of crisis surrounding English trade and finance in the seventeenth century. In contrast Dutch overseas trade was so overwhelmingly strong in this period that the V.O.C. (Vereenigde Oost-Indische Compagnie), we can assume, could have experienced no serious difficulty in securing its supply of silver. Amsterdam was responsible for supplying a large amount of the English Company's requirements also, though we must remember that even the Dutch were not free from the contemporaneous neurosis about the export of precious metals and attempted to develop alternative ways of financing their import trade from Asia.[27] But in general it can be confidently stated that the rate of eastward outflow of silver from Europe accelerated during the seventeenth and eighteenth centuries just when the production and the export of the metal was slackening off in the New World. The apparent contradiction between the two phenomena can be resolved by suggesting several possible mechanisms at work. The Dutch and English gain of silver was a partial equilibrium in the context of inter-European trade balances. Their surplus on the total balance of payments was partially held in the form of gold and silver reserves and was used to pay for the Asian imports. If there was no further replenishment, or if the rate of replacement was slower than that of the outflow to the East Indies, the total European stock of precious metals would of course have declined. But such a contraction need not have had very serious repercussions on money supply and prices in view of the accumulating stocks built up before the rise of North European trade to the Indies.[28] A further possibility is that the

down-turn in the production of American silver, so clearly visible in the middle years of the seventeenth century, did not represent a secular trend and that mining activities may have recovered later.[29]

We have now established a set of economic relationships in contemporaneous European trade, based on three unknown variables: the size of the Dutch and English balance of payments surpluses in relation to total inter-European trade, the current stocks of precious metals, and lastly the rate of their replenishment. The financial impact of East India trade on European economies can be understood fully only through a more intensive study of these relationships.

The rise of multilateral trade

From what has been said so far, it is clear that the development of European trade with Asia cannot be treated as an isolated historical event. It was an integral part of a much larger movement of expansion which in time was responsible for forging entirely new forms of economic ties between Europe and the peripheral areas.[30] When the Industrial Revolution changed the technological balance in favour of the Western countries during the nineteenth century, the existence of a global nexus of trade greatly facilitated the attempt by these countries to maximise economic gain through increased specialisation. In our period we are still at some distance from the pattern of colonial trade brought about by unbalanced growth of industrial productivity. The international exchange of commodities followed a much more random design, although the lines of geographical zones and demarcations were becoming fairly evident. So far as Europe and Asia are concerned, the commercial exchanges in both directions include manufactured goods, industrial raw materials, and secondary goods. But the balance between the various categories of exports and imports was by no means even. The import of manufactured goods from Asia was largely balanced by the export of secondary products such as precious metals and the provision of European services in the form of shipping and commercial skills in the inter-Asian trade.[31] The competition between European and Indian textiles which was to occupy such a large place in the policy-making of practically every major European country of the period was to be duplicated in time even in the production of raw materials and primary goods. Perhaps the two most dramatic examples are those of indigo and coffee. In the eighteenth century, Indian indigo was ousted from European markets by the products of the West Indies and South America, until its production was re-established in Bengal under British leadership. The coffee trade of the Yemen suffered an even greater measure of international competition in production. Within half a century of its discovery and the spread of

coffee-drinking habit, cultivation had been extended to Dutch Java and the Caribbean. The rise of multilateral pattern of trade, as we can see from similar examples, exercised a deep secondary influence on the distribution and level of world productive processes.

Contemporaneous mercantilist arguments about the necessity for maintaining an export surplus in the balance of trade were founded to a large extent on real economic facts. The effect of competitive imports on domestic industries and the level of employment is not just a feature of the present-day industrial economies. Given the restrictive nature of the monetary instruments available to authorities, it was extremely difficult to insulate a country from the economic consequences of an imbalance in its external trading account; and, if the dislocation was caused by a contraction of overseas markets resulting from the growth of foreign competitive industries or a fall in the domestic share caused by increasing imports, those sections of the population engaged in the production of the export goods were likely to feel an immediate shrinkage of earning power. No matter how small the ratio of industrial workers to the total population, the urgent problem of feeding and clothing the unemployed in the harsh climate of a cold region would remain, with explosive effects on social stability. During the first four decades of the seventeenth century, when recurring trade depressions caused serious disruptions in the English woollen industry, such fears largely motivated the government's search for an economic solution.[32] Later the serious rioting in London by the Spitalfields silk weavers sharply brought home to a parliament that had hitherto been reluctant to take action, the magnitude of the industrial discontent caused by the flood of Indian textile imports.[33] The Act of 1700 which prohibited the import and wearing of cotton chintz was certainly a direct result of the political pressure exercised by the domestic textile interests in England. It did not check the growth of Indian imports, but it encouraged instead the growth of a domestic printing and finishing industry and probably discouraged the establishment of an indigenous manufacture of cotton fabrics which could have replaced the Indian products. However ineffectual the legislation was in achieving its actual objective, there was no doubt in the minds of the English economic writers of the period that the main cause of distress in the local weaving industry was to be found in the Indian imports of the East India Company.

The fact that contemporaneous polemics on the alleged economic effects of the East India trade was apt to overlook was the long-term structural change taking place in English overseas trade. Justifying the Company's policy in 1697, Sir Josia Child confessed that the textile weavers in England were facing extraordinary hardship and he wished that some proper methods could be found to help them. But he also

pointed out that the decrease in their business was attributable to some cause other than the activities of the East India Company. Most probably it was connected with the general decay of the internal and external trade and that 'like all other restless people, who don't know where to fix the reason of their misery, they have blindly stumbled upon the next in their way, to discharge their uneasiness upon'. It must be remembered that the 1690s were a period of crisis brought about by continental wars, the deterioration of currency, and severe inflation. Child was writing at a time in the immediate aftermath of a short-term dislocation. However, even he was aware that the character of English foreign trade was undergoing a change which expressed itself in a growth of re-exports. In 1701 the anonymous author of the tract *Considerations on the East India Trade* went much further, and claimed that the East India trade could actually become an instrument of capital accumulation which in its turn would stimulate industrial development and higher productivity.[34] There is no way of checking the validity of such theoretical statements on English trade with Asia, beyond perhaps the suggestion of plausibility. We do know, however, from the statistical evidence available from the end of the century that the re-export of non-European commodities constituted a substantial proportion of the total value of English exports. This was a development which was very close to the long-cherished idea of creating in England a staple, an emporium of imported commodities such as Antwerp had once possessed. But the significance of the re-export trade was generally forgotten in the fears that England was importing and consuming too many foreign goods.

It is no exaggeration to say that, without the re-export market in Europe, Africa, and the New World, the English East India Company could not have sustained its trade for any length of time. The experience of dealing with a small and easily glutted internal market made such a deep impression on the Company's managerial committees in the early years of the seventeenth century that the sale of pepper and indigo, the two most export-oriented commodities, was rigidly controlled to make sure that the domestic demand did not face undue excess supply.[35] Since the Company in its selling policy in Europe adopted the position of a central distribution agency, there is no detailed statistical information in its records on the volume of East India goods re-exported out of the country.[36] But it is known from the correspondence between the Court of Directors and the Asian factories that, even in the case of cotton and silk goods, demand from foreign dealers, many of whom came to London to make their purchases, was a substantial proportion of total sales. The figures contained in the Customs Ledgers kept by the Inspector-General from 1697 onwards are able to provide some quantitative measures of this situation. The weakness of the official trade

returns and the difficulty of using them as economic indices are too well known to need much emphasis here.[37] A comparison between the customs figures and the Company's account books confirms the general conclusion that the official estimates or returns undervalued the re-exports and overvalued the imports. We shall shortly see the reason for this result, but it may be noted here that in some years the re-exports were not comprehensively enumerated in the final tables. Hence the bias in the official figures is likely to be in a downward direction. Even so it is remarkable that in the period 1699-1701 the recorded value of calico re-exports came to £340 000 (17 per cent) out of a total of £1 986000, constituting all the re-exports. The share of cotton goods in the exports as a whole, including the re-exports, was 5.3 per cent in these years.

The re-export of goods identifiable as non-European products constituted 22.5 per cent of the total value during 1699-1701.[38] The rising trend in the growth of English colonial trade has been ascribed to the half century from 1650 to 1700. The dynamic influence of extra-European markets in English exports continued throughout the middle decades of the eighteenth century, and the relative share of the re-exports in total trade remained fairly steady. In 1722-4 it was 26.9 per cent; in 1752-4 the proportion declined to 22.1 per cent; but in 1772-4 it had risen to 28.8 per cent of the total. The causal factors behind these structural changes in the direction and composition of English overseas trade are to be found primarily in a stagnation of the woollen industry which had previously contributed so strongly to the expansion of the exports. England's traditional markets in north western Europe were declining relative to the Mediterranean regions, and English woollens encountered strong competition from the growth of textile industries in France, Germany, and the rest of Europe. Even in the Levant and the Indian subcontinent, where English exports had once dominated the market, it was found difficult to resist the challenge from French woollen goods, which were said to be cheaper and more suitably dyed than the English products. If a limit to expansion had been reached in the market nearer home, to English exporters the trans-Atlantic areas appeared as the most promising in the eighteenth century. The spectacular growth in the import demand of the New World is fully reflected in the trade figures. In the triennial period 1752-4, the export of manufactured goods to America had overtaken the value of those sent to north western Europe, though it was still below the share of southern Europe. But by the third quarter of the century the value of this category of exports to the New World had far outstripped other areas of British trade.

During the period from 1699 to 1774 the proportion of Asian goods in total British imports fluctuated between 13 and 15 per cent. These

are by no means negligible figures, although they cannot compete with the phenomenal growth of the West Indian and American trade. There is, however, some conceptual problem in interpreting the official values in terms of relative proportions. Since the customs returns were based on valuations at prices which remained unchanged for many years, the aggregate figures obviously represent an index of volume rather than value. As a result, it is less useful to compute the regional shares than to calculate the rate of change between one time period and another. But here again it can be established from the figures given in the East India Company's own Ledger Books that the customs returns underestimate the rate of change and overestimate the absolute values. For example, the difference between the official valuations of East India imports and the real values (at cost prices paid in Asia) is seen from the following figures.[39]

Year	Official values: annual averages £	% change	Real values: annual averages £	% change
1722-4	966000	—	680143	—
1752-4	1086000	12.4	828771	22

The author of the anonymous *An essay towards finding the balance of our whole trade* provided a clear explanation of the reason why the official estimates were too high in the case of the East India Company's imports.[40] While compiling the visible balance of trade between England and Asia, he observed correctly that the value of exports, goods and bullion taken together, frequently exceeded that of the imports. This he attributed to the need for working capital and the length of the time interposing between the beginning and the end of the round voyage to the East Indies. But he also noticed that the Inspector-General's valuations of the East India goods were an average of the difference between the true cost prices and the marked-up or sales prices realised in England. The result was an overvaluation of the imports and undervaluation of the exports of such goods.

The long-term trends and fluctuations in the Company's trade will be examined later. Here we might briefly note that the landmarks of booms and depressions divide its chronology into three unequal periods. It should be pointed out that the quantitative analysis on which this conclusion is based related to the trade of the old East India Company with its New General Stock of 1657 and later the United East India Company (1709). The picture would be somewhat different if the separate joint-stocks of the 1640s and the activities of the New Company (1698-1703) are taken into account.[41] The years from 1657

to 1684 were generally ones of enormous growth. So rapid was the pace of expansion that the peak of 1684 in the Company's imports was not to be exceeded until the 1740s, although around 1700 the combined trade of the Old and the New Companies made the short peace years into one of impressive boom. The expansion of the early 1680s, partially caused by the determination of the old East India merchants to drive out new interloping ventures through a trade war, was followed by a deep depression and a succession of violent upward and downward movements which lasted almost to 1720. Commercial growth was resumed after this year and, for the rest of the period, activities continued at an average level which was much higher than the average of the previous century. As the East India Company's trade was based essentially on selling Asian commodities in Europe, the trends in imports were closely followed by those of the exports. The bilateral character of England's trade with Asia never fundamentally altered during the century from 1660 to 1760. In many ways, the history of the East India Company reflects the general developments in English overseas trade. The second half of the seventeenth century saw a high rate of new investment in commerce as contrasted with industry, and the emergence of an English entrepôt was closely related to the merchants' need for extra capital.[42] The outbreak of long continental wars in 1689 slowed down the expansion for almost two decades, and the buoyancy of English export trade after 1714 was maintained by the renewed economic prosperity in Spain and Portugal.[43] The rising trend in the value of total imports and exports in the 1720s and 1730s is comparable to the growth of the East India Company's own trade in the second quarter of the eighteenth century.

The impact of international trade

The permanent features of the impact of Asian trade on European economic life are to be found in a shift of consumer taste, which created an entirely new demand for Indian textiles and beverages, such as coffee and tea, in the development of new forms of business organisation and methods, and an intensification of Europe's trade with other continents. For Asia the rise of commercial relations with the West had less immediate and tangible effects, though in the long-run its impact was no less profound. In some areas the political consequences of European arrival were felt without a time-delay. The greater sea-power of the Portuguese and their naval victories against Islamic fleets in the Indian Ocean, followed by action against Calicut, Ormuz, Malacca, and Ceylon, must have presented the trading world of maritime Asia with a formidable problem of readjustment. A century later the inhabitants of the Spice Islands learnt the true meaning of

commercial monopoly, as Jan Pieterszoon Goen, the governor of the V.O.C. in the East Indies, proceeded to put into effect his ruthless policy of annihilation against native shipping and trade in the Moluccas. But such single-minded exploitation of economic opportunities in Asia by the Europeans was more of an exception than a general rule. In most areas outside the Indonesian archipelago, the trade of the chartered companies was conducted on the basis of free competition or at all events the existing indigenous commercial practices.[44]

The absence of quantitative information on the magnitude of total Asian trade makes it difficult to assess the true importance of the new European demand on production and the flow of commercial goods. However, from the available descriptive evidence there cannot be much doubt that in our period the influence of Western traders was felt in many directions and it was an increasing function of time. In the second half of the seventeenth century, the servants of the English East India Company still felt that the Europeans were only a very small presence in a busy commercial metropolis such as Surat or Masulipatam and that collectively their export demand was not a significant proportion of the total overseas trade of the respective ports. They certainly professed their inability to command the local markets when pressed by the Company at home to reduce the cost of East India goods. However, by the first two decades of the next century in some regions of the Indian subcontinent European trade had assumed proportions which caused one independent observer, the chief of the Ostend Company, to describe the Dutch and the English as the greatest foreign traders in Bengal.[45] In the 1730s the commercial life of Surat would have been insupportable in its decayed state wdthout the financial investments made by the trading companies. There were large areas of cloth production in India which had come to depend heavily on Western purchases to maintain the volume of industrial employment. This is particularly true of the coastal areas of western and southern India and parts of Bengal. Elsewhere, European penetration was confined to specific trade centres and did not extend to the surrounding hinterland. But their business life was all the same deeply influenced by the Western presence.

To see this, we have only to look at the history of Bantam or Mokha.[46] Both the ports possessed substantial inter-Asian trade of their own. At the beginning of the seventeenth century, when the Dutch appeared in the Indonesian archipelago, Bantam occupied a sensitive and important place in the region's trade with India and China. It was a major port of call for Chinese shipping which brought silks, tea, porcelain, zinc, and copper coins to be exchanged for pepper, sandalwood, fine spices, tortoise-shell, and ivory. The trade to India on the other hand provided a wide variety of printed cotton textiles which

served as the dominant medium of economic exchange in South East Asia. Many traders of Indian origin had established permanent residence in Bantam, and the king's *shahbandar* was described in the Dutch sources in 1604 as having come from Meliapur on the coast of Coromandel.[47] But within two decades of the V.O.C.'s arrival in Java, the Gujarati and Chetti merchants had disappeared from Bantam, though they were still to be found at Achin and other ports of the archipelago which were not under the immediate naval power of the Dutch. The determination of the Netherlands East India Company to share in the highly profitable Indian cloth trade no doubt accounts for the ousting of Indian traders at Bantam, which had the disadvantage of being within competitive distance of Jakarta, destined to become the headquarter of the Dutch in Asia (1619).

If the search for pepper drew the trading companies to Bantam, in case of Mokha the same role was performed by coffee, though its use remained limited in Europe for many years. Mokha also had a large entrepôt trade in Indian products which were exchanged for either coffee, precious metals, or European luxury goods imported from Alexandria. The Red Sea trade was so profitable to the merchants of Surat that it sustained the prosperity of the whole city, and indeed the economy of large areas of Gujarat. Even after the discovery of the Cape route to India and increase in the export of precious metals directly from Europe, the Red Sea connection remained as a vital channel in the outflow of Spanish-American silver to India and further east. To both the Dutch and English Companies an entry into the inter-Asian trade of Mokha was to appear as a glittering prize, which was all the more attractive because it proved so hard to achieve in reality. However, the possibility of purchasing coffee in the Yemen gave the two companies a foothold in Mokha, as its rulers were anxious to encourage its exportation and cultivation. By the 1720s the demand from Europe had become a permanent feature of the coffee trade in the Red Sea and it was responsible for exerting a profound influence on prices. The merchants of Mokha or the great interior mart of Beit el-Fakih marked their stocks up or down on the news of the arrival and departure of European ships. Although the consumption of coffee in the Middle East far exceeded that of Europe, the speculative nature of the market in Mokha made it very sensitive to even marginal changes in demand.

The dependence of Mokha on a single export commodity obviously imparted to the overseas trade of the port a special significance, and its fortunes were likely to be critically affected by the growth of European naval activities in the Red Sea. In India where the economy was much more diversified, changes in the volume of foreign trade conceivably would have a lesser impact.[48] But we know that the long-run effect of the European demand for Indian textiles was a very substantial

expansion in employment, as the total output was raised through a recruitment of additional labour rather than through technological improvement. In the eighteenth century, the servants of the English East India Company were constantly referring to the increase in government revenue made possible by increased industrial production.[49] The suggestion of expanding income and employment, which for Bengal at least seems plausible, raises a fundamental question regarding the structure of commodity flows between Europe and India. The first half of the eighteenth century witnessed a considerable improvement in the Indian consumption of European goods exported by the East India Company. To what extent can this be attributed to the income effect of a continuing trade surplus and the influx of bullion ? If there was an upward shift in consumer taste which made it easier for Indian merchants to sell the high-cost commodity imports of the Company, it could not have been entirely independent of the new purchasing-power created by the inflow of silver, which was at once coined into legal tender. With the available evidence, we cannot give a definite answer to these conjectural problems. But the steady rise in the prices of cotton textiles throughout the period suggests that the industrial costs at least were responding to both the demand and monetary factors.

2

A FORMAL THEORETICAL MODEL OF THE EAST INDIA COMPANY'S TRADE

The economic and political environment

The contribution of the European East India Companies to the evolution of modern world trade was in many ways unique. Operating through a formal bureaucratic structure, the chartered companies of the seventeenth and eighteenth century helped to integrate the scattered and self-contained economic regions of pre-industrial trade into a well-defined pattern. Production and consumption, both in Europe and Asia, undoubtedly increased as a result of this process. It might even have led to hitherto unutilised resources being brought into fresh use. Historically, the Conquistadors and the Iberian methods of overseas expansion had created in the southern part of the American continent a formidable economic, commercial, and political empire which continued to exert a profound influence on Europe until the latter half of the eighteenth century. Indirectly, the Spanish model was of significance even to the maritime nations of Asia, for the Dutch and English East India Companies, following in the paths of the Conquistadors, created in another continent a phenomenon not known in the history of world trade since perhaps Roman times. This was what later came to be known as economic imperialism. It was a system in which the use of political power and armed force was inseparable, both doctrinally and in terms of every-day practice, from the more normal forms of commercial activities. Important as these larger forces were, working against the general background of contemporaneous economic and political environment, there was yet a third force whose significance was of no lesser magnitude. The organisation of East India trade through joint-stock companies anticipated and perhaps even indirectly contributed to the eventual creation of modern business corporations and the abstract concept of the 'firm' as the main regulator through which the whole complex of economic production and exchange could take place. When Adam Smith, writing in the third quarter of the eighteenth century, castigated the East India Companies as the repository of monopoly power and economic inefficiency, he was to remain unaware that the end of the chartered companies not only did not presage the disappearance of the particular form of their corporate

structure but that their commercial monopoly was to be replaced by the monopoly of capitalism.[1]

For the English East India Company the transition from a relatively weak body of merchants, continually short of capital and threatened by the greater political power of the rival Dutch organisation, to the status of a great trading corporation was a process that stretched over many years. What is indisputable is the fact that very few business organisations have survived for so long and were able to maintain their position as successfully as did the East India Company. During the greater part of its history as an active commercial enterprise, the East India Company was a state within a state. Its total trading capital after 1709 was permanently lent to the Crown and the interest on the loan was secured by assigning to the Company the duties on salt and paper.[2] The possession of a legal monopoly by the Company firmly and unambiguously debarred the entry of competitors in the home market. The Company could rely on the diplomatic support of the Crown and its ministers to bring pressure on foreign European governments to subdue small rival companies on the Continent. In India and elsewhere in Asia, it had established a number of trading settlements which possessed semi-sovereign status, distinguished by an elaborate procedure of government, courts of law, a municipal system, and a military force. In these circumstances it is not surprising to discover that the Company's organisational structure and bureaucratic apparatus shared many of the attributes of a great department of state. All this happened long before the Battle of Plassey and the revolution of 1757, which changed a company of merchants into a powerful territorial force with unexpected swiftness and settled once for all the question the chief minister of the nawab of Bengal had rhetorically put before the English Council at Calcutta twelve years earlier: who should govern the province - the English or the nawab.[3]

In order to understand the dynamics of the East India Company's commercial policy and the vast array of historical material on its actual trading operations, it is important to bear in mind this peculiar functional duality. If there was a perfect example of what we today understand as the spirit of mercantilism, the East India Company embodied it in its policy of harnessing political power and privileges to commercial purpose. It was also this aspect of its image that brought the Company much public odium and hostile criticism. Adam Smith was only one among a long chain of the Company's critics, although no one had quite succeeded in putting the case against monopolies of all kinds and that of the Company in particular with greater force and logic. The polemical character of the arguments in *The Wealth of Nations* to some extent disguised the fact that by the time it came to be written, the monopoly of the Company had been greatly diluted by both

licensed and clandestine private trade to the Indies, though few would question the fact that the continued existence of a monopoly produced seriously corrupting effects in the second half of the eighteenth century in the East India Company's possessions in India. In view of this long history of fairly active opposition going back to the seventeenth century, the continued economic success and survival of the Company needs an explanation. In the long run, the reason for its great commercial and political strength must be sought at a deeper level, in the underlying structural system created by the Company's entrepreneurial and managerial committees. W. R. Scott, the historian of the Company's financial affairs, devoted a great deal of attention to an examination of the charges made by Adam Smith against the Company.[4] But there is one aspect of the case to which insufficient attention has been paid by all previous historians of the Company. In many ways, the East India Company was the direct ancestor of the modern giant business firm, handling a multitude of trading products and operating in an international setting. Hence its rules of behaviour, or economic objectives, and measures of efficiency differed radically from those of small, individual business partnerships that characterised much of medieval and early modern trade both in Europe and Asia. The type of problems which the Company encountered in the routine organisation of its trade, as for example in maintaining an operational schedule, in decision-making under uncertainty, and in resolving conflict among its members and servants, bear a striking resemblance to the theoretical problems posed by the present-day large organisations. Apart from the vast scale of its economic activities, the innovating role of the East India Company and the reason for its commercial success is perhaps to be found in the creation of a system which rested on a logical application of theoretical principles to the solution of business problems. At the same time, it made the organisation independent of purely individual operation, choices, and decisions.

The successful adoption by the Company of a systems approach, which is absolutely fundamental to the efficient functioning of any organisation with a bureaucratic structure, also goes a long way in providing an explanation for the radically different history of the commercial organisation and the evolution of the market mechanism as between Europe and Asia. In this context, it may also explain why it was the European trading companies which took the initiative in successfully penetrating the Asian markets rather than Asian merchants seeking out new outlets for their products in Europe. In emphasising the impersonal character of the East India Company's commercial operations, it should not of course be suggested that it was independent either of its personnel or the contemporaneous social environment expressed in a system of patronage and family connection. Behind the

formal structure there was an informal one composed of many different family groups whose relationship to one another was defined by mutual ties of ambitions, service, or faction. The only way these groups could control the policy of the Company was by operating within the system. It was essentially a form of business constitutionalism.

A detailed treatment and analysis of the East India Company's history during the century under study - 1660 to 1760 - is made easier by the construction of some kind of theoretical framework within which the analysis and description of its activities can take place. A specific theoretical construct of the Company's behaviour as a social, economic, or political entity in its turn needs to be supplemented by a method of inquiry which would enable such a theory itself to be built up. The need for these twin conditions becomes apparent when we take into account the spatial and temporal magnitude of the Company's history. In addition, the East India Company is among the best-documented commercial organisations in the world. The volume of historical records available is so great as to pose an insuperable problem to interpretation unless one is able to break them down into a logical sequence of analytical importance. There are a number of different viewpoints from which the history of the Company can be approached. As a collection of individuals it had obviously a social role, both in its country of origin and in those Asian countries where it traded. The financial strength of the Company also enabled it to take up a position of influence in the national economy which extended into spheres of politics. Finally, the Company was an administrative unit with concrete business problems to solve.

The methods of systems analysis

The stage has now been cleared for the actual development of a formalised theoretical model of the Company's trade which would enable us to look upon its complex history as one whole. The two key concepts which we have lightly touched on are that of a *function* and a *system.* Repetitive operations within an identifiable structure can be classified analytically by their objectives. If the outcome of the operations is expressed in terms of quantitative values, we can call them variables. Thus if the aim of the East India Company is to buy and sell East India goods, it must charter and send out to Asia a sufficient number of ships each year. The volume of shipping chartered annually can be represented as a function of the volume of goods which the Company planned to buy and sell in any particular year. As both the factors take on (or are capable of taking on) different values from year to year, they are clearly variables and, as they are also quantifiable, the functional relationship between them can be expressed in the form of a mathe-

matical constant which equates the average volume of shipping against the average volume or value of East India goods. Care must be taken to distinguish between functional relationships and causal explanations. Although the concept of a function embodies the notion of causation, it is neutral on rational explanation of the phenomenon.[5] For the latter, more information is needed on the context or the domain of the function.

One of the most useful analytical tools which allows the concept of a functional approach to be extended to include complicated structural relationships is that of general systems analysis. The characteristic features of systems theory is the notion of input (stimulus), transformation function (comprehension), and output (response). A model of the East India Company's trade that draws upon the analytical methods of the functional and systems theories must begin by indicating the various parts of the interlinked system held together by the concept of input and output. We can at once distinguish three clearly separable components. There is first of all an economic, political, and social environment which constantly affects the Company's internal state, and which the Company in its turn seeks to control so as to reduce its unpredictable impact. The decision-making part of the Company serving as a controlling mechanism forms the second component, while the third is to be found in the operational part which deals with the actual physical aspects of trade (see Figure i). It should be noted that environmental factors can be exogenous as well as endogenous to the Company's internal functioning. Purely random occurrences such as outbreaks of war, weather fluctuations, and harvest failures in so far as they affect the Company's economic condition are exogenous factors and take on the character of inputs from the environment. But systematic external elements manifested in the form of government policy or the economic behaviour of consumers can themselves be affected by the decisions and responses of the Company. In that case these posterior external states are classified as output emerging from the Company's trading system, and therefore are endogenous.

The system of input-output assumed so far is a simple deterministic relationship. An environmental input causes a change in the value of positional variables somewhere in the system in a predictable manner. For example, an increase in the rate of customs duty payable by the Company on its imports causes its costs to rise in a manner known to the decision-makers. In order to approximate more closely to the real situations in which the Company operated, it is necessary to relax the deterministic assumption, and introduce the concept of a stochastic process. The distinction between a simple mechanical process and a probablistic one is extremely important in systems theory and it can be illustrated by introducing some symbols which will be found useful

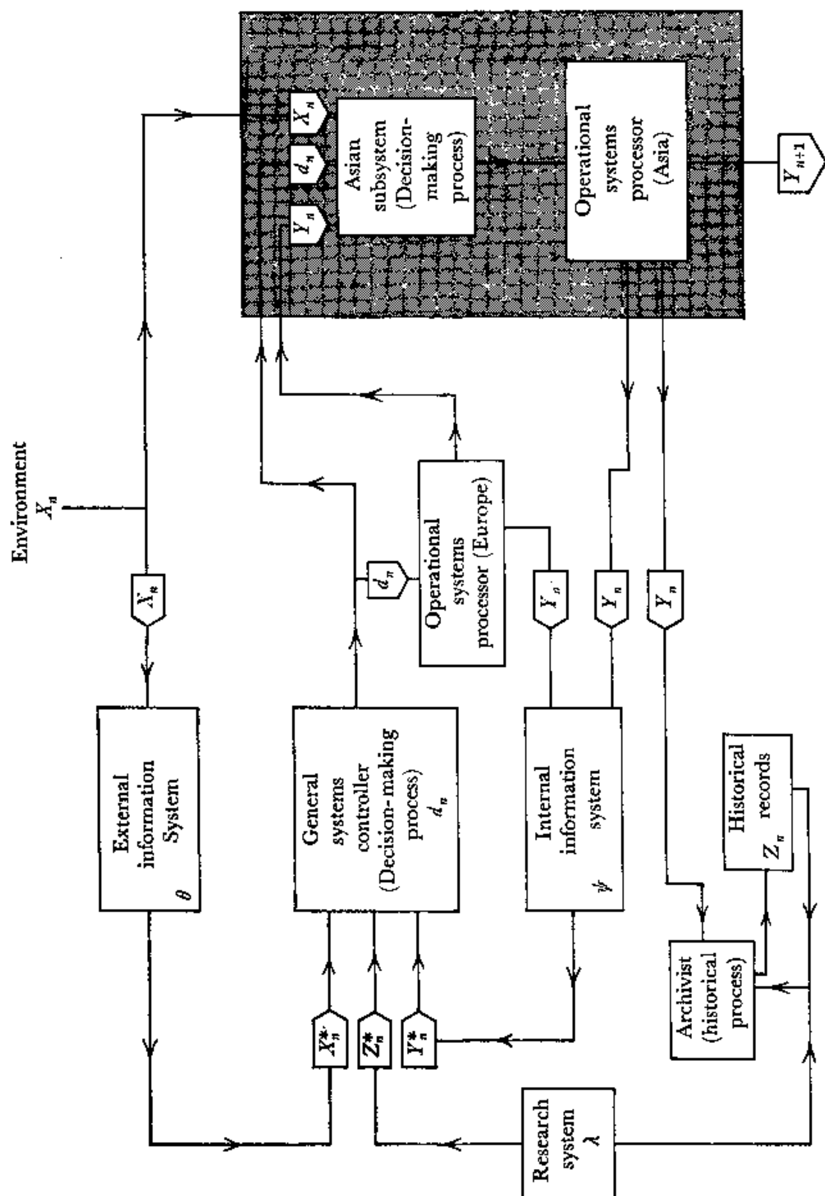


Figure 1. The Company's decision-making and operational process.

later. Thus we can postulate that an environmental input X_n is associated with the outcome Y_n in the operational system of the Company. If X_n represents weather conditions at a particular point of time, we can study its effects on the time-table or the number of ships, symbolised by Y_{ni} leaving or arriving back in port in England. However, the impact

of X_n on T_n varies in each different time-period, but not by so much as to make it totally random. The variance of T_n represents the stochastic element in the input-output relationship which the general systems controllers must take into account in taking their decisions on present and future planning of the shipping schedule. Within the decision-making part of the system there is an added complexity. Because of information-lag, what the controlling mechanism of the Company perceives is not the true environmental state X_n and the outcome T_n but X^*_n and Y^*_n which reflect the actual knowledge of the situation possessed by the Company. The difference between X_n and X^*_n introduces the information bias, as a result of which the Company's decision d_n incorporates a large element of chance variations. To summarise, the scheme contains two parallel subsystems. There is an operational section whose current output T_n is determined by actual physical inputs, X_n and T_{n-15} the latter being the prior state of the system. There is also a management subsystem with its two similar inputs X^*_n and T^*_n. The connecting linkage between the two subsystems is of course the management's capacity to take a decision, rf_n, which updates the operational section and provides yet another input to the latter at the next time period. Although the causal chain of events and decisions as presented here contains some fairly advanced theoretical problems in determining the stability of the system, the feedback process itself (the transformation function) is a simple one and can be operated at a relatively low level in the organisational hierarchy by devising elementary and predetermined decision-rules. There are varying levels of complication at which a system can operate. An accounts clerk in the East India House updating the entries in the Ledger Books would follow mechanical procedural rules (d_n) which together with the given inputs (T_n, T_{n-i}) would completely determine the outputs $(T_{n+U}$ ¥$_{n+2})$. This type of process is technically known as a third-level or thermostatic process in which the controller seeks to maintain predetermined objectives which he cannot change. But the process by which the problems before the central decision-making body of the Company can be resolved would have to take into account a much wider range of conditions both inside and outside the Company.

The formal organisation and the management structure

For an organisation as large as the East India Company, engaged in very distant trade, the main issue before the central management was how to establish a method whereby correct policy decisions could be taken. The delegation of power and authority to its servants in the Indies was equally important for the proper functioning of the operational subsystem, and a corollary of the latter problem was of course

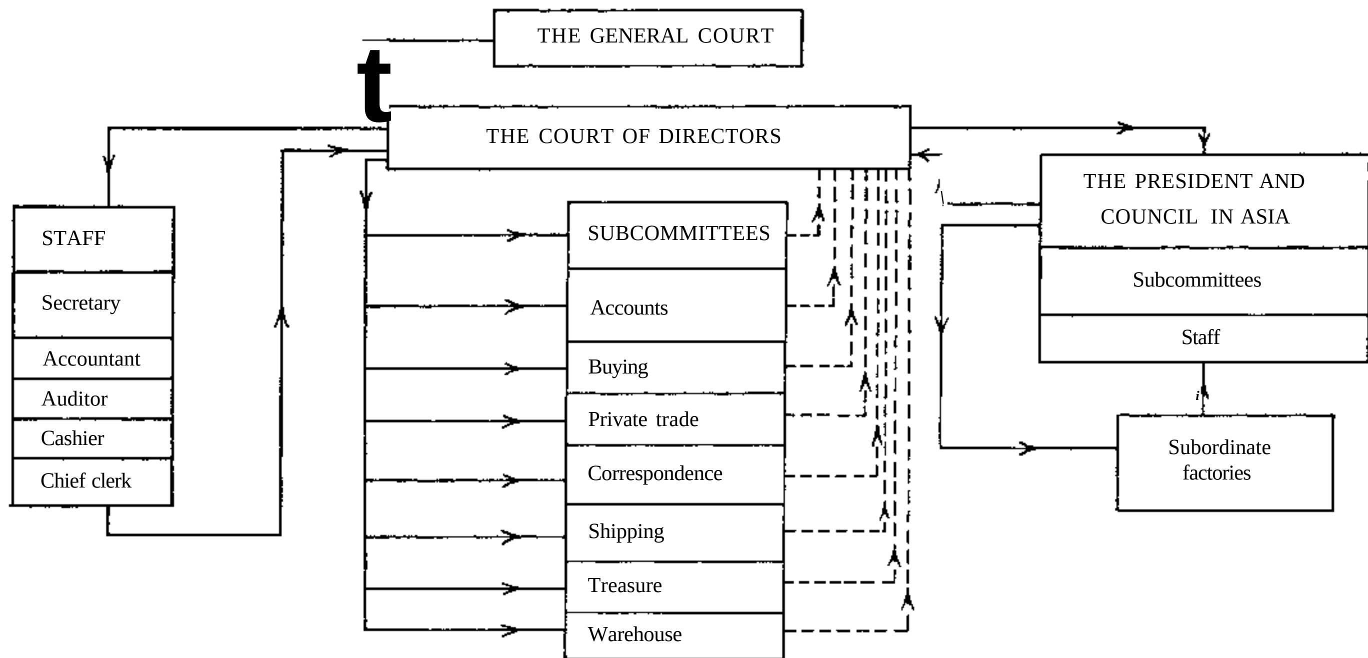


Figure 2. The East India Company's organisation.

the associated task of communication and control. One of the distinguishing features of a business firm is the existence of an independent administrative unit which is responsible for central manageiial direction. This function was performed in the East India Company by the Court of Committees whose title was changed in 1709 to that of the Court of Directors, composed of twenty-four stock-holding members elected annually. The entire Directorate and their subcommittees provided entrepreneurial services in the sense that all decisions relating to the raising and management of trading capital, the determination of the volume of trade, and the introduction of new ideas on the administrative running of the Company were strictly reserved to itself. The Company's formal channels of authority, communication, and policy are illustrated in the form of an organisation chart in Figure 2, which provides some indication of the way important decisions were taken and implemented. A further insight can be obtained from the differentiation of duties assigned to the Court of Directors' subcommittees. Looking at the overall complex of the Company's operations from a theoretical standpoint, we can see that the decision-making section falls into two parts, a superior body in London, the Court of Directors, and a subordinate one in Asia, the President and his Council in each of the Company's separate trading regions.

Both are adaptive systems, because their internal decision function d_n is not completely determined by the inputs X_n^* and T_n^*. They are free to move in many different directions and react in different ways to their internal or external states. But whereas the Court of Directors has the supreme authority to set, modify, or change the goals of the Company even to the extent of suspending its trading activities altogether, the Presidencies in Asia can vary their action only within certain prescribed limits.[6] At the level of small subordinate factories, under the command of the Presidents, we are back to the mechanical third-level system. Adaptive systems differ from the latter through the possession of a learning process. It is well known that organisations are capable of learning from their past history. In fact, it is the existence of historical records which enables the general controller of an organisation to frame policies in relation to the system as a whole and to keep to an equilibrium path. To formalise, the controlling mechanism of the East India Company, whether in London or Asia, can be said to be composed of three interlocking subsystems: an information system, a historical section, and a general control function. The first deals with both internal and external stimuli or inputs (in Figure 1, these external and internal functions are marked *0 ip)*. The operational part of the Company gives rise to a steady stream of inputs (T_M) in the form of cash available for investment, exports and imports, and shipping. The information section composed of the Company's Secretary, the Account-

ant General, and other officials converts Y_n into Y_n^*. It also deals with external information in the form of X_n^* which originated in the environment. The historical division receives the accumulated stream of Y_n^* and such records can be labelled $£_n$. It is, however, important to remember that the actual knowledge which the Court of Directors has about its own past history is not $£_n$ but Z_n^* because the historical records may be so bulky or disorganised that a research function is needed in order to extract the relevant information from them. It can be seen that the decisions of the Court (d_n) are now dependent on three inputs, ^$_n^*$5 ^$_n^*$3 Z_n^*> and the function d_n leads to the next outcome in the operational system, Y_{n+U} repeating the cycle all over again.

The decision-making process

The model developed so far merely points to the anatomy of the system. Nothing has been said yet about the internal structure of the black boxes that act as transformation functions to the various inputs and outputs. That the model approximates fairly closely to the reality will be confirmed by even a cursory examination of the Company's Court Minutes and the Letter Books. The regular weekly meetings of the full Court and those of the subcommittees of course provided the physical means of regularly reviewing the problems facing the Company. Such problems can be classified as long term and short term. The former include the framing of general objectives and goals, the choice of strategies, and the way the various administrative units of the Company were to be organised. Anybody who reads through the general letters written by the Court to the officials in the Indies throughout this period cannot fail to be struck by the remarkable constancy of the Company's aims and methods. The continued insistence on a high level of profits, reduction of overhead costs, or the acquisition of special commercial or political privileges bear an impressive tribute to the Court's perception of its long-term interests. The strategies adapted to changing circumstances for realising these objectives varied from straight commercial competition to the use of naval or military force, and continuous efforts were made to regulate and improve the formal organisation of the Company.

When we consider that over a period of hundred years the mercantile groups constituting the Company and its administrative personnel were likely to change many times, the maintenance of these long-term needs raises a separate question, and it is legitimate to ask what the methods were that allowed the Company to preserve its vital interests and thus survive as an organisation. Two possible explanations may be offered. In the first place, the organisation of the Company as a joint-stock, implying a theoretical separation between ownership and utilisation of

capital, enabled the Court of Directors to develop a collective personality and thus integrate its members into a professional managerial body. It follows from this that the continuation and the strength of such a body depend strongly on an identification of its needs. If an organisation is highly aware of its essential interests and is heavily committed to them, then obviously it will take systematic action to preserve those interests. In a different way the existence of a regular procedure for dealing with the every-day problems of trade also contributed to the survival of the Company. This is where the sub-committees played a leading role, and the Committee of Correspondence acted as a central problem-scanning body in the whole decision system. For it was this committee which first read all the letters and reports submitted by the Secretary and was responsible for locating and appraising all problems arising from trading operation or from the environment. If a particular problem requiring a decision was of a sufficiently serious nature, it would be included in the agenda of the whole Court for further discussion. Smaller problems on the other hand could be referred to one of the subcommittees. In either case, before any appropriate action could be taken and a solution reached, it was necessary for the Correspondence Committee or the Court to decide whether the problem was a unique one requiring measures as the occasion demanded or whether it was likely to occur at regular intervals. For example, a war or famine which disrupted the Company's sources of supply in India and thus caused a deviation from the planned volume of trade might need only temporary corrective action to restore equilibrium at a subsequent period. Even where such occurrences became endemic, the situation called for no more than shifting to alternative centres of production. But if the problem was to organise a system of transport between the inland towns and the Company's port of shipment, with a delicate time-schedule to allow the ships to reach England in time for the vital summer sales, regular operating rules must be devised to deal with it. This would in its turn require a systematic search for the best possible solution. In such circumstances, the Company quite often either consulted its past records or took the advice of an ex-President who had direct first-hand experience of similar problems. Once a solution had been found, the next two stages were the actual implementation of the plan and a process of evaluation which would ensure whether it was working properly or needed any modification. Finally, it may be noted that the main object of a systematic approach in the case of recurrent problems was to increase the efficiency of the Company by attempting to solve them at low hierarchical levels without having to refer them constantly to higher authorities at home.

When we come to examine the historical evolution of the Company's

trading system and its operation, it will be seen that though the Company was perfectly aware of the logical requirements of the decision-making process there was nevertheless a great deal of discrepancy between its intentions and the actual implementation of the decisions at the Asian end. Among other reasons, this was because of the difficult task of imposing control and discipline among the Company's servants and the general slowness of communications. It is self-evident that the success of the East India trade depended on reducing uncertainty and risk. Regular exchange of information and advance warning on the market conditions was of course one way of achieving such ends. In fact, in spite of the given technological constraints, the Company had a high degree of success both in its intelligence and historical sections. In setting up an effective communication network, the Court of Directors had to take into account two interrelated aspects. First of all there was the problem of selection and representation. Information in order to be intelligible must be classified by form and content. There was also the question of accuracy and time-lag, and it was necessary that the distortion between Y_n and Y^*_n should be reduced to a minimum. The practice of the Company throughout our period was to try to preserve as much of its historical records as possible and to include in it a comprehensive range of information. But there is evidence that in time the volume of documentation became so great as to require condensation in the form of abstracts.

An analysis of the structure of the Company's information system yields several general propositions. It is apparent at once that the communication network is hierarchically arranged. The lines of communication run vertically from the Court of Directors to the Presidents in Asia and from the latter to the officials next in rank at other trading stations. The President and the members of the Council can communicate directly with the Company at home, addressing themselves either to the Court or the Secretary. But this freedom and privilege was only rarely given to factories under the authority of the Presidencies. It may be suggested that in the context of group behaviour the possession of intelligence is an essential condition of power. The policy of the Company's managers at home lends strong support to this hypothesis. It was only the members of the Court of Directors who were in a position to take a central view of the Company's affairs as a whole, because no one else in its organisation had full knowledge of what was taking place in London and at the various overseas settlements. Alongside this attempt to restrict access to information considered confidential or sensitive, there were persistent efforts to extend its sources and to make it as broadly based as possible. Not only were letters sent and received in duplicate and triplicate but senior servants were encouraged to report on a wide range of subjects. Thus the same events

often featured simultaneously in the letters of the officials from Bombay, Madras, or Calcutta. By duplicating the sources, as well as maximising the information content of a message, the Company hoped to achieve two ends at the same time. It helped to reduce or dispel uncertainty, an essential condition of decision-making. It also provided a means of evaluating and monitoring the accuracy of information. An observed discrepancy between two messages, purporting to describe an identical situation, was of course one way of keeping a check on the activities of the Company's servants, for failure in communication could arise equally well from objective inaccuracies as from deliberate distortion and suppression. In order to avoid such risks the Court of Directors had a second line of defence. Concealed behind the formal structure of communication, there was an extensive system of private correspondence which did not always scruple to distinguish informers from genuine informants.[7]

If the purpose of a continuous evaluation of information and its pyramidal structure was to relate it functionally to a decision-making process in terms of inputs emerging from operations, the next logical step was to derive the categories into which the information was to be differentiated. The two basic classifications followed by the Company correspond to our earlier distinction between the environment input, X_n, and T_n. The effect of environmental factors is sought to be measured by providing as much information as possible. These relate to economic and political events at home, local trading conditions in Asia, the exports and imports of rival European companies as well as the native Asian merchants, and, finally, the policies and attitudes of foreign political powers. On the internal state of the Company the content of information required covered all aspects of the operational side, and it was both descriptive and analytical. Information is sought on the actual states, past, present, and future, and also on the causation of these states. The typology of the information contained in the Company's communication system is thus characterised by a qualitative and a functional category, in terms of a perceived difference between T_n and r^*_n, and a causal one between T_n and $Y\sim_n>$ the last of these being an estimate of what actually caused T_n to happen.

It may seem inappropriate, even in an idealised model of business behaviour, to exclude all reference to the problems of uncertainty and risk, control and co-operation. These were precisely the areas in which the merchants of the seventeenth and eighteenth centuries, trading to distant and remote places, continually struggled to establish an effectual mastery, and in which the success and failure of the East India Company itself were to be determined. What are the yardsticks by which such problems of risk can be measured? Uncertainty and risk are analytically two distinct concepts. Uncertainty refers to the proba-

bility attached to the outcome of an action, while risk is the negative consequence of such an action. With the aid of mathematical methods a system can be devised which provides a combined and continuous scale of the probability of success or failure against various degrees of risk. Thus if the measure of a particular risk is complete success or complete failure and the probability of either taking place is evenly balanced, then obviously the risk-takers' decision will be determined by the size of the stake and the value they attach to it. In the case of the East India Company, the question that the decision-makers had to answer before the feasibility of a trading or financial venture could be decided was the minimum and maximum risk that they were prepared to undertake. While uncertainty, as we have just seen, could be reduced systematically by collecting information on the environment in which the venture takes place, such as the state of the markets, the strength of a commercial rival, or the past history of prices, and by demanding a high degree of compliance from those responsible for implementing the programme. There is evidence that the problem of risk-taking was resolved by the Company by constructing boundaries or thresholds which defined the acceptable limits of risk in the context of the Company's trading operations as a whole. Whenever losses exceeded such limits instructions were given either to curtail the programme altogether or to reduce them to a more acceptable level.

In a way the question of risk is closely connected with what constitutes a satisfactory and reasonable level of performance. Not even the East India Company, earning a rate of return on capital much higher than the current interest rates, could always expect its actual achievements to match the ideal. An examination of the Company's records demonstrates conclusively that a major source of uncertainty and instability in its trading system came from the difficult task of enforcing compliance among its servants. The most common cause of commercial failures in the history of the Company was generally at the level of execution. Nor were the alternative means of control available to the Directors, such as to permit quick and effective counter-action. The exercise of purely coercive powers in the form of dismissals, forfeiture of financial guarantees, or prosecution in the courts of law were often tried and certainly used as a deterrent to potential malefactors. But these measures were to be used as a last resort. They contributed very little to the problem of efficiency and co-operation. Distribution of side-payments and regular rewards, both actual and symbolic, is an alternative manifestation of power. The Court of Directors was aware of its value and attempted to secure compliance to its orders first by allowing large and generous salaries to their senior servants and later by granting the freedom of private trade, which came to be regarded as the principal attraction of a career in the Indies. The carefully

arranged hierarchical pattern of authority which was established at the Asian trading settlements was another powerful factor in uniting conflicting interests and forging a common bond between the recipients of power at home and those overseas. It can scarcely be overlooked that the East India Company operated against a highly traditional background, and the weight of legitimacy which tradition and custom imparts to those who exercise power needs no special emphasis.[8] However, in the last analysis there was very little remedy against failure of individual judgement, and the rancorous comments of the Court of Directors which fill the pages of the Letter Books point to the chronic vulnerability of the Company's servants to human errors.

The trading variables and the operational system

The economic success of the East India Company, often struggling to master an alien and hostile political environment, was no doubt in a large measure the result of a systematic process of decision-making, communication, and control. The main purpose of the management system was to reduce the complexities originating from the actual trading conditions to an ordered sequence of operational plans. The maintenance and implementation of these plans were of course the responsibility of those in charge of the operational control process. Thus the function of the Company's President and Council situated in India or elsewhere resembled that of the Court of Directors in London, with the important difference that the trading programme was laid down by the latter and could not be modified beyond a certain limit. It is also apparent that the Court, in addition to acting as a general systems controller, was in charge of the trading operations at the European end, acting mainly through the subcommittees, which in their managerial capacity were subordinate to the entrepreneurial function of the Court. Although the controlling parts of the Company's operational system were separated spatially between two continents, theoretically they belonged to the same functional structure, and close co-ordination had to be maintained between them in order to keep the actual programme on target. The decision-making process within the operational system closely resembled that of the Court of Directors and its various stages can be analysed in the form of a logical sequence of policy and action.

The concept of input, output, and the transformation function of course apply as much to the physical world as to the controlling action of men. The East India Company's commercial organisation and trading schedule can be viewed as a separate system in which certain factors, such as shipping, treasure, or supply of men, were inputs leading to a stream of outputs in the form of imported commodities.

The latter themselves were inputs to another subsystem giving rise through the process of sale to tangible financial assets, which in their turn created outputs in the next temporal phase to act as inputs into the Asian subsystem. There was thus a continuous sequence of activities, each of which was precariously balanced on the efficacy of action taken in the preceding period. Within one single time-cycle, however, the trading operations can be divided structurally into three subsystems. Two of these were located in Europe; the third and most important one was in Asia. These were subsystems in a purely operational planning sense, and not in the sense of administrative departments. The structure is illustrated by means of a two-way table (see Table A.i). A description

Table A. i. *Input—output table of the Company's operational variables*

Output from Input into	Subsystem I (London)	Subsystem II (Asia)	Subsystem III (London)
Subsystem I (London)			Sales revenue, net bond issues, Exchequer loan interest, new share capital, reserve funds
Subsystem II (Asia)	Shipping, export of treasure, goods, stores, personnel		
Subsystem III (London)		Import goods, inward shipping, profits from country trade, revenue from Asian settlements	

Note: Subsystem I = The Committees of shipping, Treasure, Exports, and Correspondence; Subsystem II = All the Asian Presidencies and Factories; Subsystem III = The Committee of Warehouses, the Accountant General's Department, and the Court of Directors.

of the entire trading model can begin conveniently with the subsystem that dealt with operations at the start of the time-cycle. We are concerned at this stage with only operational plans and rules. Strategic considerations which actually determined the values or dimensions of the inputs or outputs will be examined later when we come to look at the economic model of the Company's trade.

It is obvious that the organisation of an efficient system of transportation was one of the most important pre-requisites of distant trading in the pre-industrial age. What gave shipping its overriding significance were the problems of both time and space. The East India voyage was notoriously at the mercy of seasonal changes in regular trade winds, and the Company's trading factories were scattered from

the Persian Gulf and the Red Sea, across the Indian Ocean, to the China seas. The logistics of the system not only called for a carefully constructed time-table but the entire complex of the Company's trading activities had to be organised with reference to the arrival and departure of ships. The shipping schedule had to take into account three interdependent transport operations: the direct voyage between London and the various Asian factories, the interfactory traffic which connected the main ports of shipment with secondary collecting points and finally the arrangements for local trading between one Asian port and another.

The part played by shipping in the East India Company's commercial organisation was analogous to that of machinery in a modern industrial firm. Although it was an output of the first subsystem and an input to the second, it was also the means (transformation function) whereby the other outputs from subsystem I were converted into inputs to subsystem II. This duality also holds between the latter and subsystem III. The variables which enter into the schematic form represented in Table A.i can be rearranged to conform to this analytical distinction (see Table A.2). We can call them simple and

Table A.2. *The classification of the operational variables*

	Simple variables	Functional variables
Subsystem I	Treasure, commodities, stores	Shipping, men
Subsystem II	Goods	Shipping, men, profits from country trade, revenue from Asian settlements
Subsystem III	Revenue from the sale of Asian goods	Net bond issues, income from the Exchequer loans, reserve funds

functional variables, respectively, according to whether they serve merely as raw materials to the trading system or whether they take on the role of capital goods in the production process. The two other types of outputs in subsystem I, the exports from Europe and the recruitment of personnel to staff the factories in the Indies, fall into these categories. If the decision-rules relating to the shipping arrangements were exceptionally difficult to implement, those applying to the procurement of treasure, broadcloth, and other European commodities were fairly simple. Legislation enacted towards the end of the seventeenth century, presented the Company with a single alternative choice. The Company was required to export 10 per cent of the total value of its annual exports in commodities, as a result of which the

volume of export goods could be varied only in an upward direction. The question of how much to send to each individual factory was simply settled by requesting the factors to submit a forecast of demand. Purchases in England were then adjusted to the muster of Asian orders. In case of treasure the position was a little more complicated, since it was supplied from more diversified sources, which could be as far away as Cadiz and Lisbon or as nearer to London as Amsterdam or Rotterdam. The implication of this dependence on more than one centre can be seen in the complex banking and shipping arrangements made by the Committee of Treasure, which allowed the treasure to be paid for and transported to London in time for the departing East-Indiamen. At the Asian end the disposal of goods and treasure presented few problems, except for the larger question of the generally sluggish demand for European commodities in the local markets. The practice followed by the Company was to sell the goods to the local merchants with a mark-up on the invoice price, while the treasure was either coined into local currencies or disposed of to the bankers and money-changers. Associated with European exports there was a separate problem which the controllers in subsystem II had to solve before these could be converted into outputs in the shape of East India goods. The supply of funds and the volume of purchasing power created by the European exports were highly seasonal and represented a sudden injection of liquidity, whereas the sequence of ordering, buying, and delivery of the Company's import goods was a year-round operation. To maintain continuity here, regular recourse had to be made to the local capital markets which provided bridging finance. The cost of such borrowings was often very high, and the Court of Directors at home was never able to reach a satisfactory decision model that would enable their servants in Asia to achieve an equilibrium between projected expenditure, income, and an acceptable level of indebtedness.

The organisation of the Company's trading system in Asia, whose operational aspects we have labelled subsystem II, far exceeded in complexity what the first phase of the programme was required to achieve. A series of intricate manoeuvres involving the loading and unloading of ships, co-ordinating their movements between one port and another, disposal of goods and treasure, keeping a ready stock of money at hand, and inspection of the commodities previously ordered as return cargo for the ships had to be executed by the Presidents and Councils within a limited period of time. In addition, there were purely administrative duties to be performed, only indirectly connected with trade. Many of the trading settlements had a sizeable population. Influx of useful people, traders, artisans, and labourers, deliberately encouraged as a means of securing a solid financial and economic foundation for the settlements demanded at the same time that law

and order be enforced, supplies of foodstuffs organised, and regulations governing markets and occupations framed.

With supplying and consuming markets separated by thousands of miles and served by a slow means of communication, it was of utmost importance that a systematic solution should be found to the problem of maintaining equilibrium between supply and demand. The basic rule followed by the East India Company was to send out to each factory in Asia a list of commodities required from it. Based on the results of the auction sales held in London, the lists specified the exact quantities and often also the price of goods to be supplied, and their purpose was to serve as a guideline to the servants in shaping their policy on buying. The orders generally arrived in the third quarter of the year, while the returning ships sailed early in the new year. The ensuing three months were not sufficient for obtaining full cargoes without having recourse to the spot market, which for such large wholesale dealers as the East India Company meant inevitably paying much higher prices than usual. This difficulty could be avoided if the goods were ordered in advance on the basis of fixed contracts, even though it meant that they would not reach home until two and a half years had elapsed from the time they were ordered in London. The only disadvantage of the contract system was the possibility of failure on the part of the merchants to deliver the orders on time, which could be inadvertent as well as deliberate, and the laborious checking of the quality of goods and the continuous adjustment to the contract prices if they diverged from the quality specified in the samples.

In framing a general policy in relation to the operations in sub-system II what the decision-makers in London and the Indies alike had to take into consideration was the varying time-span of the planning period, which can be classified as short, medium, and long term. The question of how to set up the best possible method for procuring the goods was likely to come up only at relatively long intervals of time, when the existing system persistently failed to meet the trade objectives, either in terms of the volume of output, cost, and quality control. This was a matter involving structural changes. But the annual process of bargaining with the Company's Asian merchants which determined the contract price, acceptable to both sides, was a medium-term and recurrent problem, which needed only intermittent attention. Finally, a sudden shortfall in the goods as the shipping season approached involved organising alternative supplies within the shortest possible time. The last stage in the Company's trading operations within one time-cycle began with the arrival in London of its ships and their cargo. The Court of Directors, acting through the Committees for Warehouses and Private Trade, arranged four quarterly auction sales, held in the East India House itself, which turned the goods into cash,

ready to act as inputs to the subsystem II during the next cycle of trade. Although the quarterly sales seldom demanded more than routine procedures, the organisers did not entirely escape having to face executive decisions. For example, the question exactly when and how much of a particular commodity should be offered for sale required as an answer a careful survey of the current state of the commodity market, particularly taking into account the supplies reaching or likely to reach Europe through the rival companies trading with Asia.

The model which has been suggested and elaborated upon so far mostly refers to the behavioural aspects of the East India Company's trading organisation. It takes very little account, at least explicitly, of the tools of economic analysis which permit an alternative approach to the examination of the objective and decision variables entering into the vast matrix of the Company's commercial operations. It is not easy to construct a satisfactory theoretical model which makes it possible statistically to test formal propositions about the price and output behaviour of the East India Company. At a more disaggregated level of activity, it is possible to isolate a number of economic relationships that are to be estimated and analysed in terms of functional variables. Clearly the year-to-year fluctuations in the actual values of the Company's exports and imports were not entirely the result of chance factors, and changes in one variable were likely to set in motion a chain reaction in others. The problem before the economic model-builder of the Company is to specify definite causal relationships the parameters of which entered into the Company's commercial calculations and determined the direction and magnitude of variations in the entire trading system. We start with the initial condition, corresponding to subsystem I of Table A.i, when the Court of Directors decided on a particular level of investment to be sent to the various factories in Asia. If we treat this as a dependent variable, it can be expressed as a function of two sets of variables. One of these is best described as a qualitative forecast based on an analysis of the previous sales of the Company's imports in London. It is a relationship derived from the output decision and in our model expressed as a linear function of the quantities of goods imported in a previous time-period. The other set of factors comprises the level of costs and purely financial considerations such as the volume of gross sales, profits, the rates of interest in London and in India, and perhaps also general business confidence at home. Since the level of investment is identical in most cases, though not in all, with the level of exports there would be other factors which might affect the latter, as for example, the price of bullion, the bimetallic ratio in Europe and Asia, and the prices of export goods. The next step in our model is to derive the associated volume of shipping which again, taken by itself, is a function of freight rates and the volume of shipping

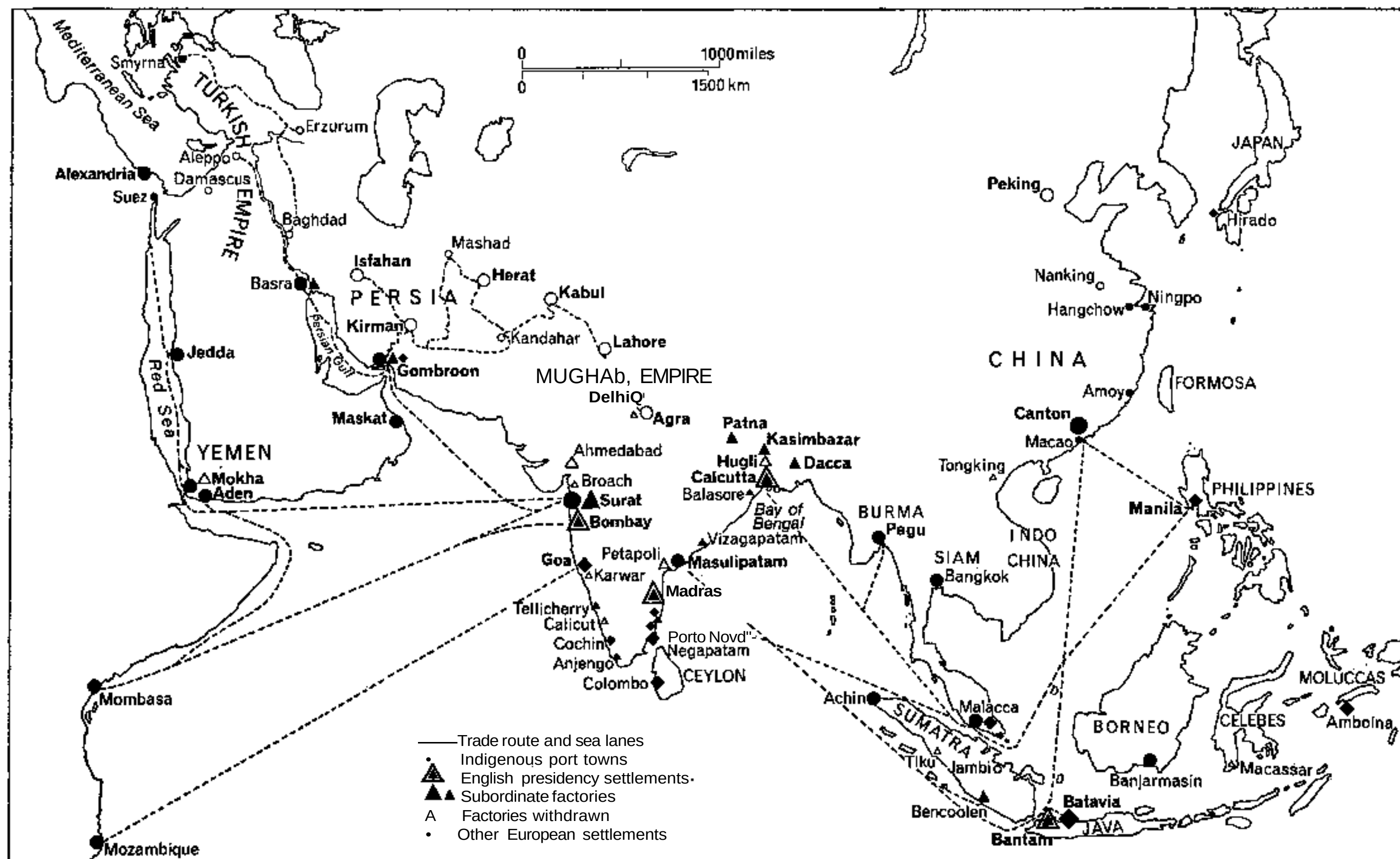
already under charter. The model is now shifted to Asia with a time-lag of about eight months, and we are seeking to discover the variables that determine the level of the Company's imports. These can be identified as the actual list of orders received from London and the sale prices, the cost price of the import goods in Asia, and of course the amount of finance available for their purchase. The final relationship in the model expresses the total sales as a function of various costs, the Company's pricing policy, the volume of goods offered in the market by other competitors, the level of inventory holdings, and the relative prices of substitute goods.

Some of the variables that enter into the complete structural model are jointly determined. Others again are completely exogenous, and cannot be measured or quantified even approximately. It is evident that there were a large number of environmental factors which exercised a strong influence on the East India Company's commercial system and which appear in the guise of random variations when excluded from the estimating equations. European wars, drought and famine in India, storms at sea, or an unexpected change of policy on the part of Asian political rulers, these were unsystematic hazards over which the Company had very little control. Their effects on trade are felt through the Company's own experience of the frequency of such occurrences as well as more directly through the physical obstacles they caused. But not all exogenous influences were completely random and unpredictable. For instance, the organisation of the market and the institutional process by which buyers and sellers came into contact, the nature and content of information through which the participants communicated, changes in consumer tastes and the general political background in the form of the government's taxation policy and support for special privileges were all known to the Company and could be allowed for in advance. Indeed, it is possible to suggest that the continual search for commercial concessions at home and in Asia and the attempt to establish semi-independent territorial strongholds overseas, from which trade could be carried on in greater security, were expressions of the East India Company's effort to control and influence its environment and render it more predictable.

3

THE STRUCTURE OF EARLY TRADE AND THE PATTERN OF COMMERCIAL SETTLEMENTS IN ASIA

The history of the East India Company is as susceptible as any other to the perennial problem facing historians, that of reconciling the difference between static and dynamic, structure and events, analysis and description.[1] The theoretical approach of a formal systems or economic model, if it increases clarity and perception of complex relationships through abstraction, does so at the expense of reality. For a model cannot without destroying itself take account of the passage of time which affects its structural boundaries and parameters. Yet such changes take place all the time and constitute one of the most important processes of history. The framework created by the East India Company was no exception. The work of creation was a long-drawn affair, and many modifications were required before it reached a state of comparative stability. Some of the unreality which stems from the application of a static model to phenomena that are essentially dynamic can be resolved by looking at the actual evolution of the Company's trading organisation. The main purpose of this organisation was to trade, to buy goods in the Asian markets and sell them in Europe. During the course of a century it naturally gave rise to long time-series on the Company's exports and imports, its financial balance-sheet, profits and dividends. In the language of our model, these were the inputs and outputs of the system, and their history obeyed its own separate set of rules. But successful trading by the Company demanded the location and establishment of sources of supplies, construction of ships, the appointment of able men, a regular exchange of correspondence, and above all an operational plan which took into account the spatial demarcation of economic regions and the temporal constraints of long-distance commerce. In other words, the Company's decisions were not only concerned with the determination of the actual volume of trade in the light of forecasted demand or other market conditions but also related to the choice of best methods to be followed in organising trade. Important as these questions were to the efficient functioning of the Company, they are difficult to integrate analytically into our systems model. For problems of organisation and structure fall uneasily between the decision-making part of the model and the purely



The East India Company's settlements in the Indies 1660-1760.

operational. They constitute an output from the former which is also an input to the latter, but only in a very special sense; they are the 'capital goods' of the Company's production process. Similar difficulties arise when dynamic changes are studied. Time can be treated as an independent variable within a given model or a part of other variables entering into it. However, structural changes invariably involve comparison between two static situations, a method which will be followed in the analysis of the Company's trading system.

By and large the same economic forces which had moulded and shaped the Company's commercial organisation at the beginning of its trade to the Indies continued to operate during our period. This framework rested in the earlier half of the seventeenth century on the two great trading regions of the Indies, the Indian subcontinent and the islands of the Indonesian archipelago. As the Company's trading products diversified, other regions were added to it, and problems of space and time, those of locating and establishing effective supply centres and the associated task of communication and control, became urgent. The contrast between the first four decades of the century and the latter ones in the Company's history, heightened as it was by the outbreak of civil war in England in the 1640s and the interregnum in the 1650s, was striking. The crisis of capital and financial liquidity which seems to have affected practically every branch of English overseas trade in the earlier period was almost over. In the early years of the Restoration, the East India Company found little difficulty in raising fresh capital, and in spite of the Great Fire and the renewed occurrence of the plague in London, its trade rapidly increased, turning London into a rival of Amsterdam as an emporium of the imported products of the east. In India and elsewhere in the Indies, the Company's trading organisation and policy began to assume a final form that was to endure in its basic structure halfway through the eighteenth century. But the history of the Company which begins in 1657 has a natural and terminal chronological landmark in 1709, if for no other reason than the fact that this was the year in which the Old and the New East India Companies, the two rival contenders to the trade since 1698, formally merged to form the United Company.[2]

There are other reasons why the period from 1657 to 1709 should, for the purpose of analysis, be distinguished from the years that followed. The aftermath of the union was a period of stability for the Company. Its trading system needed little fundamental innovation and it had reached the peak of its organisational efficiency. The essential continuity of the Company's post-1709 history is revealed in the maintenance of the same trading centres, operational plans, and procedural rules. It is doubtful whether a comparison of the Company's structure between 1710 and 1750 would show anything other than differences

of finer details. The preceding period, on the other hand, was one of vigorous experiments, of continuous search for new trade routes, of new commodities, and fresh outlets for both exports and imports. The work of commercial reconstruction which began with the resumption of trade in 1657 continued during the next two decades. The Company's records for these twenty years spell out in detail all the problems which confronted the Court of Committees and their officials in Asia in creating a viable economic system. Those of the later period tend merely to confirm or repeat the norms fashioned in the seventeenth century.

The business challenges which confronted the Company in the second half of this century contained little that was entirely new. The Company emerged from the period of decline during the last years of the Civil War with exclusive rights of trade stronger than ever before, though its financial strength did not fully recover till 1659. With the Stuart Restoration, the charter of 1657 was replaced with another instrument from Charles II, which brought the Company added strength of legitimacy.[3] During the republican years the Company's monopoly had been attacked, though in 1650 the House of Commons passed a resolution stating the East India trade should be carried on by one company with a single joint-stock.[4] Between 1680 and 1698 there were a number of separate attempts made by rival commercial groups to reduce the powers of the legal Company, and the main object of these so-called 'interlopers' was either to persuade the government to open the East India trade to private individual English merchants or to enlarge the membership of the original monopolistic organisation. The fact that none of these attempts succeeded in the end in weakening the principle of exclusive rights and the joint-stock capitalisation of the East India Company has obscured the larger question of whether this particular form of commercial organisation was best suited for the conducting of Europe's trade with Asia in the seventeenth and eighteenth century. In other words, the existence and the activities of the East India Company cannot be treated for the historian at least as self-justifying. The managerial committees of the Company of course always claimed that without the continuity brought by the joint-stock capital structure the Asian trade would not have been viable. Yet paradoxically whenever separately financed voyages were organised, either within or outside the Company, few of them failed to make substantial profits. The experience of individual trading in the 1650s can be supported by the success of interloping voyages in the 1680s when traders like Captain Thomas Bowrey were recognised, even by the Company, as highly successful commercial entrepreneurs.[5] To these comments the Court of Directors would have replied that the separate traders benefited from the political and economic conditions created by

the chartered companies in Asia, which indirectly extended to them, fellow Europeans, the protection of specially fostered political relationships.[6] But hypothetical as the whole question is, it is hard to avoid the impression that the attitude of European trading companies towards Asian powers may itself have been responsible for creating the need for these special relationships.[7] When the members of the New Company or the organisation founded in Ostend under the Imperial Habsburg flag appeared in India, the Mughal officials went out of their way to welcome them at the trading ports, in spite of their apparent collective weakness. The relative benefit of open trading as against closed was never properly put to the test and the decision to adopt a monopolistic form of organisation was derived on the basis of conditions in Europe rather than those in Asia.

However controversial were the contemporary views on the institutional characteristics of the East India trade, there was no disagreement about its distant nature. One of the main features of the East India Company's trade was the wide geographical areas it encompassed. The outward cargoes carried by its ships included Mexican and Peruvian silver, Swedish copper, English woollen cloth, Mediterranean coral, and African ivory. The same ships brought back from Asia commodities so finely differentiated that it took more than 200 pages in the Ledger Books to list them, commodities which varied from the products of arid, almost desert zones to those of the tropics and the highlands of China. There was, however, a marked difference between the trading methods adopted by the Company in Europe and those followed in Asia. In Europe the Company saw little reason to set up a trading network directly under its own corporate control. The economic and political environment was perfectly familiar to the managerial committees and they could use the existing commercial institutions without any hazards. But Asia offered no such security, at least in the minds of the Company's Directors. Apart from the political dangers involved in risking the lives of the servants, money, and goods within the powers of unknown rulers, time and distance reduced all normal measures of commercial risks into a meaningless calculation. This fact explains the growth of the 'factory' system and the eventual rise of the fortified settlements and sovereign enclaves which not only handled all trading business for the merchants at home but also flew the flag of St George as a symbol of national representation.[8]

The most important consideration in determining the pattern of the Company's settlements in the Indies was the accessibility to markets and centres of production supplying the import goods. On the demand side, shifts in consumer tastes were also important, though they operated in a more diffused manner over a longer time-scale. But these changes could affect prices and with it the profitability of a whole range of

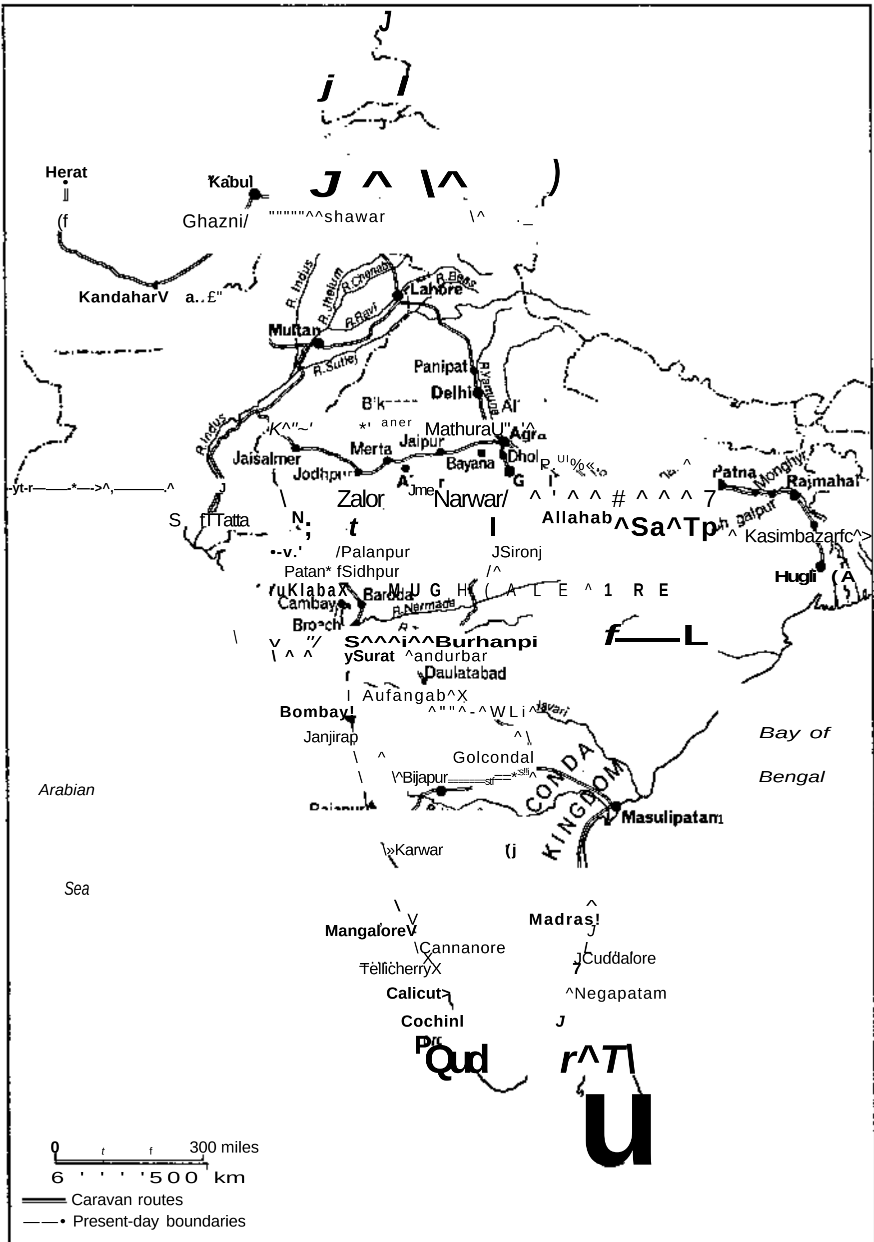
products imported by the Company. The explanation for the rise and fall in its investment flows and the regional distribution of the goods must be sought in the simultaneous and invisible working of both of these two causal agents. The Company's servants at first settled in those areas of the Indies which the indigenous trade and production methods had singled out as the most favoured economic regions. This was nothing unusual, as the European demand was only an insignificant part of Asia's total productive capacity at the beginning of the seventeenth century. In time, as the trading companies gained in strength and their trade began to equal and even surpass in value and volume the trade of Asian merchants, European presence could determine the fate of the older commercial centres. Nowhere is this illustrated better than in the case of towns founded by the English East India Company. The rise of Madras to commercial prominence, the gradual emergence of Calcutta as a metropolis from the swamps and marshes of lower Bengal, and the long struggle of Bombay to capture some of the economic prosperity of its northern rival, Surat, were all part of the same process of change and readjustment set in motion by the European expansion in maritime India.[9]

Almost without exception the East India Company's early factories in India were situated in cities and towns, or were very close to them. In a pre-industrial economy, the economic functions of towns were concentrated primarily around the distributive services. In many cases, the towns of Mughal India of course acted also as important centres of industrial handicrafts.[10] The location of such crafts in urban areas must have owed a great deal to the pattern of local trading, the concentration of merchants, and the availability of finance which made it easier for the producers to adjust their output to market conditions. Apart from the greater security which a walled or fortified town might afford to industrial workers, there were no compelling technological reasons for the industries of early modern India to develop exclusively in urban centres.[11] But the officials of the East India Company found in Asian towns a focal point for both the necessary services in intermediate commercial transactions and their own need to co-ordinate all the physical arrangements demanded by the complex operational schedule of long-distance trading. The inseparable bond between communication, trade, and towns was as much a feature of Asia as it was of contemporaneous Europe.[12] This simple basic fact goes a long way in explaining the structure and the regional pattern of the Company's factories and settlements not only in India but in Asia as a whole.

In the case of East India trade one of the consequences of the great distance separating the consuming areas from the producing was a perpetual disequilibrium between the forces of supply and demand. For example, at a time of economic recession or financial difficulties

at home the Court of Directors might order the withdrawal of peripheral factories as a cost-reducing measure. Such factories could not be dissolved without affecting the entire structure of the Company's commercial organisation in that particular region. The short-term gain in the form of a reduction of overhead costs could be off-set by a loss of market share to the Company's competitors, and if the commodities supplied by these factories were still required at home the withdrawal might actually increase unit costs, because they would have to be purchased in metropolitan markets from speculators and middlemen. The history of the Company during the immediate years following the charter of 1657 provides many examples of the continual opposition between a policy of retrenchment and one of expansion. For the task before the subscribers of the new stock was not how to expand their trade in Asia but how to make it financially viable by cutting back on the unnecessary number of factories. In 1661 the centre of the East India Company's northern trade was still firmly located in Surat. The Chief of the Surat Factory still carried the title of President and the area of his authority extended to the subordinate factories at Broach, Ahmedabad, and Tatta in Sind in the north, Karwar, Kayal, and Rajapur further south down the coast, Gombroon and Isfahan in Persia, Basra in the Persian Gulf, and finally Mokha in the Yemen.[13] Four years after the new stock had opened, trade was still so bad that the Court of Committees felt it imperative to write to the Surat Factory in March of the same year, 'We having received many greate discouragements by losse during this stock, and seriously considering . . . many unnecessary factories in your parts . . . we have thereupon resolved, and do hereby order, that the factories of Agra, Amadavad, Mocha, and Bussora be immediately deserted and that our houses and all remaynes in each and every of those factories be sold and disposed of to the best advantage of the Company.'[14]

The closing-down of the outlying factories in early 1661 was undertaken in the belief that a reduction of overhead costs would enable the head settlements to function more efficiently and provide commodities required by the Company for its direct trade with Europe and for its trade with Bantam in the Indonesian archipelago. The economic importance of Surat no doubt partially explains why the Company permitted their servants to reside and conduct their business for so long at a place directly under the authority of the Mughal Imperial officers when in other parts of the Indies trade was carried on from well-fortified settlements. As a port on the western seaboard of India Surat had no serious rival.[15] It was the hub from which sea-lanes radiated to all the famous ports of the Indian Ocean and beyond. On the landward side, caravan routes from north, east, and south converged on the city. During his visit to Surat in 1689 John Ovington, who acted as a



Main caravan routes in **India** ***c.*** 1650.

chaplain to the English Factory, saw goods from Agra, Delhi, Broach, and Ahmedabad for sale in town, which attracted merchants of all nations, Europeans, Turks, Arabs, Persians, and Armenians. 'Suratt is reckoned the most famed Emporium of the Indian Empire,' he wrote, 'where all commodities are vendible, though they never were there seen before . . . And not only from Europe, but from China, Persia, Arabia, and other remote parts of India. Ships unload abundance of all kinds of goods, for the ornament of the city, as well as enriching of the port.'[16] Even in the third decade of the eighteenth century, by which time the city had begun to lose its sources of strength, a servant of the Company described Surat as 'the storehouse of all India'.[17] It was not without reason that John Fryer commented in 1664 that the Surat Presidency was superior to all others in the East Indies, even the newly independent Agency of Bantam 'being not long since subordinate to it'.[18]

It is true that, with the acquisition of Bombay from the Portuguese in 1661 and its actual occupation four years later, strenuous efforts were made to attract trade to the island. But the Company's dream of making Bombay an effective rival to Surat remained unfulfilled for more than a century, and the island's long struggle to supplant the rich northern rival lasted well beyond 1759, when the Surat fort was captured by English forces and its guns commanding the port and the river ceased to be a menace.[19] It is not easy to suggest any single cause for Bombay's commercial failure during this period. A notoriously unhealthy climate was certainly one factor, but perhaps a more fundamental explanation can be found in the geographical location of Bombay. In an age when land carriage was the indispensable complement of sea transport, the bond between towns and roads was as vital to trade as the arteries connecting the brain and the heart are to the human body. The towns serving the seventeenth-century trading world faced death if these arteries were severed. The space and convenience afforded by Bombay's deep-water harbour was off-set by the steep and rugged hills, the western *ghats,* which enclosed the island only a short distance from the sea. Surat on the other hand was much nearer to the caravan routes passing through the rich and fertile plains of Gujarat towards the cities of Upper India, and easily acted as the catchment point for the goods coming down to the coast for shipment overseas. It was difficult for a new port to displace a city of such strength, particularly if it is inhabited by some of the most skilled and enterprising business communities of India. That contemporary merchants were perfectly aware of such reasoning can be seen in the context of a different situation. When the English Company urged the Armenian merchants of Isfahan in the 1690s to move away from Aleppo, the traditional Middle East market of Persian silk and European woollen goods, Khwaja Goegas Calendar and his associates wrote from Julfa in 1695, 'that a marchant

who has been long used to one sort of trade will not give that over to fall into another unless they can see some extraordinary profit in the new trade'.[20]

The reduction of the northern factories was an expression of the same vigorous policy which the Company adopted in the second half of the seventeenth century for a better exploitation of economic opportunities available in its various Asian trading areas. The settlements in Gujarat and northern India had developed in response to the needs of the Company's textile trade. When the basis of this trade changed and moved away to southern India and Bengal, their decline followed swiftly. It would be a mistake, however, to look upon these withdrawals as an indication of a general relaxation of the Company's long-standing insistence on buying goods in the cheapest market. It was just that the factory system had outlived its usefulness in that area, and it was found cheaper to exercise supervision over the broker or his subagents through the periodical inspection of the investment areas carried out by factors sent from Surat or Broach.[21] These two Gujarat factories were supplemented by a number of settlements kept on the Malabar coast. Agriculturally one of the most productive regions of India, the narrow coastal belt stretching southwards from Goa to Cape Comorin attracted the European merchant companies for a number of reasons. Kanara and Malabar were the home of that rare spice, cardamom, and produced a coarse sort of cinnamon known as cassia lignum. But more than anything else there was the fact that the coast was the world's second great supplier of black pepper at this time. Both the Dutch and English East India Companies looked to Malabar as an alternative to the Indonesian archipelago for the purchase of pepper. In the eighteenth century the two English settlements at Tellicherry and Anjengo, both of which were fortified, supplied the bulk of the English pepper supplies from the Indian subcontinent.[22] Their rise witnessed the gradual change of emphasis from one method of trade to another, for the chief aim of the Company's commercial policy in Asia in the 1680s was to seek political security in the power of its 'great guns' and fortify the main settlements.

However, by definition a sea-power cannot establish positions of strength far from the sea. The withdrawal of the Company's inland factories in Gujarat, the emergence of Bombay as its administrative headquarters in the 1690s, and the foundation of Calcutta and its subsequent fortification were all part of a single movement. One of the remarkable features of the typology of the East India Company's settlements was that, in spite of a divergent history and chronology, there was a close similarity of development which could not have been the result of chance or accidental factors. An analysis of the main features of the Company's settlements shows that structurally they fall

into two broad categories. There was first of all the unfortified chief factory, usually situated in one of the existing centres of trade, supported by a complex of subordinate factories - also without defences - in the interior. The second type was composed of fully defended head settlements, such as Bombay, Madras, or Calcutta, with a satellite system of smaller forts. The transition from one system to another, from the first to the second, naturally took place at different points in time and in different areas, and there were many hybrid survivals. In Bengal for example, the inland factories, though capable of some resistance, were never allowed by the Mughal rulers to build any kind of real fortification. But the typology was sufficiently distinctive in each case and its explanation must be sought once again in the centralised structure of the Company's decision-making process and the strong awareness of the policy-makers of the long-term, historical objectives.

On the coast of Coromandel and in Bengal, the Presidency towns founded by the Company enjoyed a much greater measure of commercial success as local trading ports than did Bombay in western India. The meteoric rise of Madras from an inconsiderable town in 1639, when it was acquired from a local chief, to the position of a leading port in Coromandel three decades later was an object of justifiable pride to the Court of Committees.[23] Even Alexander Hamilton, a sea captain and a country trader, who had nothing good to say about any of the Company's settlements in India, admitted that Madras was enriched by the migration of Indian merchants and that the trade and industry of the town supported an estimated population of 80000.[24] How can we account for Madras's growth to prosperity as compared to Bombay's failure? A possible answer lies in the contrasting nature of politics, society, and the trade of the two areas. In the north the Mughal rule was much longer established. Whatever may have been its actual defects, the strong centralised administration of the Mughals had created throughout the Empire an order that was lacking in the south during the mid-seventeenth century. The Coromandel coast on the other hand was ruled by a number of warring dynasties, and its economic life was being continually disrupted by wars of conquest, first between the Hindu rulers of Vijayanagar and Muslim Golconda and later between Golconda itself and the Mughals. Socially also the south was deeply divided, and many traders and artisans with the stigma of low caste attached to their ritualistic status must have found in English neutrality a welcome economic and social freedom, though even within the walls of Madras the inhabitants of the Black Town were not entirely free from bloody caste conflicts. Lastly, one must not forget the purely commercial forces at work. The indigenous merchants of Gujarat were better organised and more unified in their economic outlook than the merchants in the south, who were not only scattered

up and down the coast over a much larger area but were also dependent on the Europeans for their business to a much greater extent.[25] The trade of Coromandel mainly looked eastward across the Bay of Bengal, and the sea-lanes to the eastern ports came to be effectively controlled by European armed shipping.[26]

In the 1680s with the expansion in the Company's textile trade, the Court of Committees began to refer to Bengal as the rising investment area in India. Although factories had been established at Balasore, Hugli, Kasimbazar, and Dacca over the previous three decades, the productive capacity of the province, as seen in the lower prices of export goods, convinced the Company that here was an area the full potential of which was not yet properly utilised.[27] Of course no one engaged in the maritime trade of Gujarat and Coromandel could have been long unaware of Bengal's contribution to Asia's international trade. It was the granary from which the deficient areas of India were fed.[28] The demand for luxury garments in the princely households in the subcontinent and beyond was met from the handlooms of Bengal, and the silk weavers of Gujarat depended for their supply of raw material on the importation of silk yarn from the northern district of Bengal. The commercial importance of the area for the European trading companies stemmed from its three staple products, the high-quality cotton textiles known as muslins, raw silk, and saltpetre. However, the early attempts of the Company to open trading relations with Bengal in the 1620s had failed because the factors approached it through the overland route used by merchants from Agra and other up-country cities when the economics of transport called for the cheaper and easier passage by sea. But here again the Company experienced initial difficulties. Even though the province had a magnificent system of rivers and inland waterways, Bengal was virtually a landlocked region for the overseas trader equipped with deep-water sailing ships. All deltas with large silt-carrying rivers tend to be dangerous to shipping: Bengal was exceptional. Apart from the river Hugli, the coastline indented as it was by thousands of creeks and channels did not offer a single passage of safe navigation to large ships.[29] Even the mouth of the Hugli with its constantly changing shoals and sandbanks was considered so dangerous that it was not until 1672 that the Company was able to induce any of its sea captains to sail up to the busy commercial town 150 miles from the estuary of the river to which it had given its own name. The navigational problems of Bengal were eventually solved for the Company as were also the complicated logistics of trade which involved close co-ordination with Madras over the time-table and distribution of shipping and cargo, and Bengal emerged as the premier trading region of the East India Company in the eighteenth century. After the Company's brief war with the Mughal Empire (1688-9), Job

Charnock returned with the remnant of his followers to settle at an obscure village on the left bank of the river.[30] Through the uncertain years that followed, one aim was not forgotten: that the Company might acquire a fortified settlement in Bengal and thus complete the triangle the two other apexes of which were formed by Madras and Bombay.[31] The opportunity actually offered itself by accident when the foundation of Mughal rule in Bengal was suddenly shaken by a serious local rebellion in 1696. The military danger from the rebel forces induced the Mughal governor to allow the European Companies to erect some fortification to protect their factories. Out of this 'large liberty' came the walls of Fort William, strengthened in 1698 by the purchase of the *zamindari* of three villages which later formed part of the city of Calcutta.[32]

Between 1660 and 1680 the centre of gravity in the Company's commercial policy moved to the south, from Surat to Madras, and by the turn of the century the economic ascendancy of Madras was being challenged by Bengal. During the same period a similar movement also occurred in the other area of English trade with Asia, the East Indies, where the fierce age-old contest over the mastery of the pepper trade slowly gave way before the rising promise of trade with the Chinese mainland. Here the historical developments were at once simpler and more complicated. It was simpler because the Indonesian archipelago could offer to the English East India Company only one commodity. It was more complicated because in its effort to retain control over the supply of pepper and extend trade eastward the Company encountered strong forces over which it had little control. The immediate task before the Company in the 1660s was to secure a sound base for its pepper and to strengthen the mechanism on which the pepper trade rested. If the Company's servants made persistent attempts in these years both in Bantam and Surat to trade at Achin, Kedah, the ports of Indo-China and Siam, and even to Formosa, it was because of their awareness that the pepper trade of Java and Sumatra had wider ramifications in South East Asia.[33] But the support of the Court of Committees at home for local trading between India and the East Indies was conditional on the ability of the factors to buy pepper more profitably by selling imported Indian cotton textiles in the local markets.

In the southern sphere of trade, Bantam had always been the most important factory of the English East India Company. The Dutch embargo against the port, which lasted from 1651 to 1659, had reduced its importance and given a stimulus to the smaller and subordinate factories in Sumatra. But with the reopening of Bantam, the Company's factory there once again reverted to its Presidency status and it was able to supply very substantial quantities of pepper until the final blow

fell in 1682. Although the Company never underestimated the Dutch determination to acquire an exclusive control over the pepper trade, the sudden dynastic crisis that led the V.O.C. to intervene in the politics of Bantam, gain control of the port, and expel the English, took the Court of Committees by surprise.[34] Their immediate reaction to the defeat in Java, at a place where the Company had traded for the best part of the century, was to equip a strong naval fleet as a preparation for recovering the lost ground. In the end, the plans for resisting the Dutch aggression in Bantam by force were called off on the diplomatic intervention of Charles II and the Netherlands ambassador.[35] But events were to show that if the V.O.C, by triumphing in Java and expelling the English, had hoped to achieve a pepper monopoly in the East Indies it was mistaken in its view of the East India Company's resolve to resist the attempt. The struggle now shifted to Sumatra, and there was little doubt in the minds of the English Directorate that the old contest over cloves and nutmegs in the Moluccas was repeating itself in a new form in another area. In a remarkable statement of policy, the Madras Council was informed in 1686 that if only the Company's leading officials in India would learn the wisdom of establishing fortified places and defray their costs from local revenue, the Dutch should have no joy in having captured Bantam 'but rather repent that wisdom which their injustice hath forced us to learn of them'.[36] The intense search for an alternative settlement in Sumatra which could take the place of Bantam resulted in the foundation of Bencoolen in 1685, though for a long time the factory remained more of a financial liability rather than an asset.

In their important letter of January 1686, which outlined the policy to be followed towards South East Asia, the Court readily confessed that none of the proposed settlements in west Sumatra had the same locational advantage as Bantam did for a possible trade to China and Japan. This was only one indication among many that the Indonesian archipelago was already being looked upon as a halfway house between the trade of the Indian subcontinent and the trade of the Far East. There were powerful reasons why the Company should take an increasing interest in China. The Portuguese in their day had driven a highly profitable trade between their settlement in Macao and Japan. The Dutch found in Japanese silver, before its export was prohibited, a welcome addition to the supplies sent from Europe. The Company itself hoped in the 1670s that the Far East may open up sizeable markets for English woollen textiles.[37] However, the many failures that occurred before the China trade took on the appearance of a prosperous and regular commercial undertaking at the beginning of the eighteenth century can be attributed to a basic misconception on the part of the Company about the true conditions in the Far Eastern trade. The

success of the direct trade between China and Europe had to await the creation of new markets in the West for Chinese commodities; it did not rest on the sale of European goods in China. Until the advent of tea-drinking made the China trade highly profitable to the Company, the Court were not prepared to give a free hand to the servants in India or South East Asia to engage in the other eighteenth-century corollary of China voyages, the regular commercial exchanges between Canton, Madras, and Bombay. Apart from internal policy considerations, the political realities in China also differed radically from the Company's trading organisation in other parts of Asia. This was an area which stubbornly resisted the many attempts made to introduce the factory system, and the mere freedom to trade at one specified port of Imperial China was considered in the light of greater experience to be as great a privilege as the right to establish fortified bases had appeared in the context of the Company's Indian trade. Consequently an entirely new method of trade had to be created, the method of trading from board the Company's ships, which came to be known as the Council of Supercargoes.[38] The securing of exemption from the strict regulations applied by the Chinese authorities to all foreign ships and traders remained as a permanent objective, and even after three decades of intermittent trading with China, the Company thought it necessary to instruct the supercargoes in 1710 to remind the mandarins on arrival at Canton that no ships were sent to China for several years because of the ill-treatment and arbitrary impositions suffered previously.[39]

By the early eighteenth century the Company's settlements and factories in Asia had reached the limits of possible expansion in terms of the amount and number of commodities for which the Company could find a market. A trading organisation that included within it the Arab world, the Persian Empire, the Mughal dominions, South East Asia, and China did not leave much room for further expansion. Its economic and political objectives likewise were beginning to match the long-term objectives of the central management. The situation was approaching the point of equilibrium, and oscillations, where they took place, were confined to a narrow band around this point. The structural stability of the entire trading system lasted well beyond the 1740s and 1750s, when intervention by the Company's servants in local politics introduced a new element to the previous range of policy considerations and eventually changed the whole character of the East India Company's territorial presence in Asia. To a great extent this development was disowned and resisted by the members of the Court of Directors at home. In their eyes participation in wars of succession in India, accompanied by territorial expansion and other forms of imperial responsibilities, better suited the purpose of the Company's servants in various Indian settlements than the commercial needs of

the organisation in Europe. Even after the overthrow of Sirajud-Daula and the political triumph of Clive in 1757, the Company's policy on the settlements and territorial acquisitions continued to be dominated by the previous pattern of thought. When the Calcutta Council suggested to the Court in 1758 that the Kasimbazar Factory should be fortified so as to overawe the Nawab's neighbouring capital of Murshidabad, the Directorate reminded the Bengal servants that the latter's grand military plans and ideas had made them forget that the employers they served were merchants whose principal object was trade.[40]

Political or imperial adventures in India were frowned upon by the Company at home for the same reason that the opening of new factories was disliked in the earlier period. They tended to increase the overhead costs of trade without bringing immediate financial returns. An organisation as conscious of general commercial goals and business ethos as the East India Company, could scarcely overlook, in spite of its long tradition of political manipulation, an aspect of trade that did not take into account short-term maximisation of profits. The ideal equilibrium point for the Company would have been no doubt a situation in which its settlements in Asia were politically completely independent of local rulers, in which artisans and workmen, living within the fortified walls and working for subsistence wages, provided the entire range of investment goods and the expenses of the administration were contributed in full by the local inhabitants.[41] That these ideals were never quite realised was not due to any lack of political thinking by the East India Directorate. They remained unrealised because their fulfilment would have required just the kind of imperial operations against which the members of the Court were vociferous in their protests since the 1730s.

4
THE EVOLUTION OF THE COMPANY'S TRADING SYSTEM: OPERATION AND POLICY 1660-1760

Decision-making on the level of trade

It is evident from an analysis of the Company's general policy on its commercial organisation in Asia that this was an area where the discrepancy between the decisions and planning undertaken by the central controllers in London and the actual implementation at the operational end in the East Indies was at its minimum. The Court of Directors was seldom prepared to tolerate for too long flagrant disregard of its orders on the maintenance of unwanted factories and settlements that showed a persistent incapacity to make profits. But this aspect of the Company's decision-making only required action at infrequent intervals. The temporal pattern of the Company's trading organisation in the Indies can be compared to those components which incorporate the trend and regular cycles. When the Committee of Correspondence sat down to consider the merits and demerits of a particular trading region or a settlement, its location, political security, accessibility to markets, transport costs, and so on, they were not thinking in other than static terms. Where the time factor actively entered into their considerations, it was as changes by a series of approximations towards the ideal objectives, the criteria that determined the position and value of a settlement. When conditions at a particular settlement reached near enough to the objectives, a partial equilibrium was achieved.[1] From a theoretical point it was not difficult to lay down precise directives on such matters and the Company's servants had no particular interest in going against the policy of Leadenhall Street.[2] Decision-making on the day-to-day or year-to-year operational variables was quite a different thing. For the economic basis of decision-rules might change either in Europe or in the Indies, causing the rule itself to change. This would have created automatically an unintended discrepancy between previous planning and current implementation. A greater problem for the management was to decide what constituted a satisfactory level of performance. The Committee of Correspondence and the other sub-committees systematically and carefully examined every aspect of the servants' activities each year, but they did not always specify the exact

nature of the quantitative formuli used to measure the economic objectives. By applying modern statistical techniques to the Company's major trade series, it is possible to test the degree of relationship between different variables. The results of these tests show that only half of the annual fluctuations in the value of the Company's exports and two-thirds of those in the volume of imports can be attributed to the influence of the systematic decision variables for a selected period in the eighteenth century (see Appendix 3). The remaining part of the variance was caused either by random factors or by decisions that are not directly quantifiable.

From the outward and inward letters exchanged between the Court of Directors and the Asian settlements, some idea can be derived about the subjective considerations that determined or influenced the decisions to vary the volume of trade. Also the comments of the Court leave no room for doubt as to when the conduct of the servants in administering the Company's affairs fell short of expectation. In particular the close connection between the cost price of the imported goods, their profitability, and the general financial condition of the Company received special treatment in the letters to the Surat Factory, which was repeatedly censured for bad economic performance.[3] That the Surat Council itself was perfectly aware of the interaction between supply and demand factors is indicated by its own recommendation in 1677 that the Company's trade in western India should be reduced for a few years. This, the Council believed, would have the effect of raising demand at home and cutting losses on the sale of European goods in Surat.[4] Later on during the first decade of the eighteenth century when unsettled financial and business conditions in Europe brought about by wars had seriously curtailed the Company's liquidity, the Asian imports, or the 'investments' as they appear in contemporaneous nomenclature, were described as the mainspring of future financial supplies to the Indian factories.[5] Once again, Bombay was the chief target of the Court of Directors' displeasure at what was considered to be the ill-management of the servants. By 1714 the Court's patience at Bombay's persistent failure to show any improvement had virtually run out, and the Council was warned of the consequences that might follow. 'When we shall find the Trade of your side of India', the Directors wrote, 'turn to good advantage we may have some inclination to furnish you with a double stock as you propose, but till then we are so much of another mind that were it not we must keep Bombay, we should be ready to desert the whole, especially if it should happen as at present that we cannot find a large yearly vend for our woollen manufactures and our goods so bad and dear charged that some turn to loss, others pay bare interest and insurance and few render us tollerable profit.'[6]

From this passage and other similar letters sent out during the same period, we can draw our own conclusions about the factors that determined the Company's demand for Asian goods. The reference to the limited sale of European exports must be treated as a constraint which at this time took on an acute form because of the general shortage of silver. The level of average profits on particular lines of goods was a direct function of the total costs computed according to a definite formula. The most important components were the overhead charges of the Asian settlements, the prime costs of the imports, freight and demurrage, interest and insurance charges, and finally, the customs payments.[7] It can be assumed that the Company's elasticity of demand for imports would be critically affected by changes in costs, though there were other variables likely to have been involved in the economic decisions of the managerial committees. To take a final example of the type of considerations that influenced the rhythm of the Company's business activities, we can look at the following passage from a letter to the Calcutta Council, written in 1754, 'The not receiving your investment in a proper time for our sales is not only a real loss by being kept out of our money but it occasions likewise great difficultys in providing for the ensuing export as may easily imagine upon reflecting how large a part of our stock is invested in Bengal goods; the embarrassment this season has been inconceivable and we expect you will exert yourself to prevent our suffering in a like manner again. The late arrival of your investment is likewise attended with this further very material inconvenience that it prevents our making such observations upon the goods in time as are necessary to form and be inserted in the ensuing list.'[8]

However, it is one thing to identify the crucial variables that determined the decision-makers' subjective model of trade, from the recorded pronouncements and views and quite another to establish their precise quantitative relationship with one another. For example, it can rightly be asked that if the average cost price of the Company's imports from the Indies were to go up substantially in any year or if there were a serious shortfall in the sales revenue at home, would these events actually cause a measurable change in the value of the imports at a subsequent period ? If the answer is positive, a further question arises about the length of the time-period over which the effects of the disturbance would last before the overall commercial objectives of the Company - such as its maintenance of the market share - would restore the volume of trade to a pre-determined level. It is entirely conceivable that the assumption of fixed rules or a constancy of economic responses implied in the first question is in reality constrained by the institutional environment in which the East India Company operated in the seventeenth and eighteenth centuries. Of course commercial decisions

were taken on the basis of certain simple rules guiding the managing committees. The following one is a good example. In 1711 the Court of Directors informed the Calcutta Council, 'When we once see the true cost of every commodity, we can by casting up their values at the sale and the freight and custom on each, easily judge whether we could have any more and what quantitys sent us.[59]

If this was the way that the annual list of orders for the East India goods was compiled, the causal mechanism was more complicated when we turn to the Directors' estimate of the amount of capital which was to be sent to Asia in order to support the commercial plans of the various factories. The exact considerations can be retraced by taking a look at the procedures followed by the Committee of Correspondence which was responsible for making the detailed calculations. The Committee held a series of meetings before the approach of the shipping season in the autumn and winter and aided by the accountants made an estimate of the total amount of goods which they wished to order from the Indies. The quantities of each variety of commodity, we assume from the above passage, are influenced by their cost and profitability in the immediate past, as also by the level of stocks. Indeed, it is known that the accountants supplied the Committee with the figures from the previous sales and on the volume of goods still in the warehouses waiting to be sold. Having decided how much to order from each factory, the Committee then transforms the quantities into values through an estimated vector of cost prices. The final figure is then adjusted by taking into account the amount of reserve funds estimated to be available at the Asian end and presumably the supplementary sums provided by the bills of exchange. On the first point the Company wrote to the Bombay Council in 1737, 'The calculate of quick stock which we have ordered annually to be sent is not only to show us what remains for the use of the ensuing Investment, but likewise, that we may form a true judgment of our Estate, consisting of Cash, Goods in the warehouse, stores and good debts . . . You must therefore draw it out in the most accurate manner accordingly.'[10]

The process of decision-making was obviously complicated because of the complexity of accounts at the Indian settlements and the multiplicity of goods, but the logic behind the administrative procedure can be seen unambiguously from the following example of a meeting on a China voyage. 'The Committee had now laid before them', the minutes of the Correspondence Committee recorded in December 1723, 'a paper entitled estimate of a cargo to be loaden in China upon the ship *Macclesjield* let for 450 tons which was read and contained the several species and quantities of goods proper to be purchased at Canton for the Coast [of Coromandel] and also for Europe together with directions for their stowage whereby it appears that the computation of the said

goods will cost £48,000 and the same being taken into consideration the Committee agreed thereto and resolved that it be represented to the Court as the opinion of this Committee that to the value of £50,000 be loaden on board.'[11] What is striking about this passage is that nothing was said about the profitability of the goods previously imported. That would have been already decided at another meeting. As a side-check on the export figures the Court had devised other rules of thumb, of which the capital to tonnage ratio was one. When the Bombay Council complained in 1719 that the Company was providing them with insufficient amounts of funds, the reply of the Court drew Bombay's attention to the fact that hitherto it was thought enough to allow £10000 to every 100 tons on a Surat ship.[12] In general the annual order list drawn up by the Correspondence Committee was the most direct expression of the Company's demand for Asian imports.

The capital requirements of the Asian factories

It may seem odd that the central managerial committees in London very seldom admitted any error of judgement on their part, and yet instability in trade, given the sequential pattern of activities, could easily arise from a misjudgement about the amount and proportion of capital funds which the East India House needed to send out to the Indies in order to support a specified volume of imports in return. If the Company and its officials in Asia were to avoid any imbalance between intended planning and actual implementation, they had to take into account three predictive exercises in decision-making. In the first place, the Directorate had the responsibility to see that the annual level of exports and the capitalisation of the Asian factories was in step with the expected demand for the imported goods which would arrive two years later. The second problem was to make sure that there was no serious error or disagreement about the amount of reserve funds available for investment at individual factories, as the total size of the capital sums assigned to them from London would depend on such assessments. The final and the most critical part of the operation was the ability of the officials in Asia to make advance contracts for goods in anticipation of the exact orders and financial resources that were to come from Europe. A shortfall in procuring the commodities would invariably increase the import to export ratio, and an oversupply might run the factory into debt with high interest charges. Both of these possibilities were certain to provoke censure from the home authorities.

The commercial history of the Company during the two decades from 1660 vividly illustrates the force of such problems. The wide fluctuations in the volume of trade in the late 1660s were caused by a

series of random disturbances originating in Europe, of which the outbreak of war with Holland was the most serious one.[13] But the impact of these environmental factors on the Company's decision-makers varied according to their function and location. In the main, two contradictory responses were to be seen. In reducing the volume of trading capital for despatch to the Indies, following the Dutch war, the Court of Committees took the view in London that the existing surpluses in the Asian factories were adequate to maintain an average level of imports. If waste and extravagance were reduced and the stock utilised on direct investments for Europe instead of being dispersed in uneconomic subordinate factories and useless country voyages, the Court believed, a better ratio could be achieved between working capital and return investments.[14] The Surat Factory, however, disagreed that a more efficient use of stock was the main problem. According to Aungier, the President, the absolute amount of stock which had been sent in the past was insufficient to meet the Company's commercial objectives, which were both too ambitious and too inflexible. In November 1670, when replying to the Court's criticism the Surat President very clearly outlined the difficulties which had arisen in the process of implementing planning into operations. The chief reason why the Surat Factory was continually running into local debts and was starved of working capital lay in the fact that the Company had greatly expanded its shipping tonnage without a corresponding increase in stock. It was rare in the past, Aungier claimed, for the Company to send out in any one year 900 to 1000 tons of shipping, but in August 1669 *the* goods for the European markets required 1200 tons. In the current year it was no less than 1600 tons. Another additional strain on the finances was imposed by the Court's order that one of the returning ships should be despatched as early as October so as to take advantage of the spring sale in London. It was impossible to provide cargo for the early ship unless the goods were purchased before the monsoon rains set in and this had to be done out of the funds received during the previous shipping season. Aungier concluded by repeating that 'we shall be put to a great stress to provide the large quantity of goods now enordered against next year, which you will find your present stocke in India, when your creditors are satisfied, will not stand'.[15]

Part of the difficulties faced by the Surat Factory on financial allocations was because of the fact that in the 1670s the Company was diverting a greater proportion of its export funds to Bengal through the Madras Council. Bengal was a province which was free of the local wars which were beginning to devastate the Deccan and parts of southern India.[16] In 1681 the Company definitely announced that its investments in Bengal were henceforth to be greatly enlarged and the reason given was that the goods sent from this region were of a higher quality

and lower cost than those from other areas. It was pointed out at the same time that a better ratio between imports and exports would enable the Company to capitalise the trade more fully.[17] The value of the exports was in fact already being stepped up, and a gratified Surat Council acknowledged that the increased stock, particularly the bullion, had enabled them to clear off all the accumulated debts and get out of the *shroffs'* books, a measure that was regarded as a great improvement for the outlook of future investments.[18] The boom in East India trade had its origin in a number of different factors. In the late 1670s English foreign trade was undergoing a process of broadening and expansion. There was a general easing of the capital supply which brought down the interest rates and made it less costly to hold large stocks of goods. The rise of the interloping voyages to the Indies also made the Company determined to resist the threat to its exclusive monopoly by increasing the import of Indian goods. The repayment of large borrowings in Surat had redeemed the Factory's credit and reduced the interest charges. The implication of this development was not lost on the Court of Committees. 'Considering interest of money is so low with you,' Child and his fellow Directors wrote in 1682, 'and that we do resolve to send you continually such large supplyes of shipping till we have ruined the trade of all Interlopers, we do think it for our service, and do accordingly order you . . . that you do continually keep buying up of all sorts of goods in the bazar.'[19] The huge increase in orders which took place in these years was the direct consequence of the Company's decision to fight competition with a trade war.[20]

The period from 1683 and 1705 was a disturbing one for the Company. The first notable check came in the form of a severe financial crisis in the City towards the end of 1682. In April 1683, the Court described the effects in a letter to Bengal, 'The enclosed is a copy of our last [letter] by the *Herbert,* since which many Accidents have happened to the affairs of this Company not only in the loss of Bantam to the Dutch and the *Johanna* outward bound . . . but more especially by an extraordinary and unparalleled Fail of Credit in all the publique Funds of this Citty which hath caused the failure of diverse Goldsmiths in Lumburd Street.'[21] As it turned out the monetary stringency and its effects did not last long, but the impact of the large orders placed two years earlier had yet to be felt. By the end of 1683 the market for East India goods was severely depressed, and even the Company was surprised by its extent.[22] With the receding threat from interlopers, the old emphasis on maximising prices by adjusting supplies to demand conditions returned, and the volume of imports for the next few years continued to be cut-back until the war with Mughal India suddenly brought all trading activities to a practical standstill. For the next

decade and a half the fortunes of the East India trade shared the disruptions brought about by European conflicts. The depletion of stocks created a keen demand and high prices for oriental commodities, and throughout the 1690s the Company was urging the Indian factories to make better returns, even though it was not always able to furnish them with sufficient funds.[23] The boom in the export values during 1698-1701 was cut short by the declaration of war in 1702. The return of wartime conditions in Europe affected the East India Company in two ways. Its markets in Central Europe were slowly disrupted with large-scale troop movements, but much more serious was an immediate shortage of bullion. During the brief period of peace, the Company had built up good connections with the commercial houses in Cadiz which directly supplied its ships on their way to the Indies with silver. These sources disappeared at one stroke after 1702. By 1706, new duties, dull markets, and the scarcity of bullion were all being put forward as an explanation for the low level of trade.[24] There was a brief up-turn during 1709-11 which was partially the result of the formal union between the two rival companies. But in 1713, writing to Bengal, the Company explained that it had decided to send so little tonnage and stock in this year as compared with the volume usually sent, because of the number of ships already on the way home and the low price of East India goods in the European markets. It was also expected that with the approaching peace, the freight and demurrage rates would fall to the pre-war level, and that prospect made it worthwhile to postpone the enlargement of the shipping.[25]

The main characteristic of the Company's trade in the period following the Treaty of Utrecht was a relative absence of sudden crisis. Even the wars of the early 1740s and the Seven Years' War did not leave as much impression as did the conflicts of the previous century. Perhaps the most serious financial event in the first half of the eighteenth century was the collapse of the South Sea Company in England and the parallel bankruptcies on the continent. In the spring of 1721 the Company informed Madras, 'When we took up in August last the large quantity of shipping before mentioned, it was upon the prospect of our Trade being carryed on with its usual currency, but some little time after that a General Stagnation of Credit overspread all these parts of Europe. Holland, France, Spain and Italy, as well as Britain have felt the sad effects of it, each countrey affecting the others, insomuch that bullion was not to be gotten, though we thought we had made a sufficient provision for it. The merchants abroad were afraid of parting with their ready money (for bullion is such). This was heightened by many and very eminent Merchants being run upon beyond what they were able to answer, having their effects abroad, and the same evil has befallen several . . . bankers in this and the neighbouring countreys.'[26]

Yet a comparison of the export values for 1720-1 with those of the preceding season reveals only a negligible decline.[27] The progress towards some kind of equilibrium in the rhythm of the Company's exports and imports did not lessen the Court's vigilance over the policy of the servants in Asia. Nothing aroused greater apprehension than the prospect of the administrative costs of the settlements becoming a direct charge on the commercial outlays. The account books of the factories were examined with minute attention to details. The expenses of the table were constantly questioned and extravagant private life style among the servants in the Indies condemned with puritanical zeal.[28] In 1719 the Company noted with pleasure that the general annual charges of Calcutta were greatly reduced from what they had been in the preceding years.[29] Apart from the general consideration of establishing norms of business efficiency, there were sufficient irregularities in the accounts to convince the Court that frequent cost-benefit analysis of the settlements was absolutely necessary.

The classic example was Bencoolen in Sumatra, the inefficient, unprofitable, and corrupt settlement *par excellence.* In 1711 an examination of the account books from the time of its foundation in 1685 *° I7°2 yielded the following results. Bencoolen had altogether received from England a total investment of 1332394 reales, while the value of goods returned by the settlement to Madras and to England came to only 631077, leaving a balance of 701317 reales to be accounted for by administrative charges.[30] The only satisfaction which the Company could find in the state of affairs at Bencoolen was the fact that the servants' 'insatiable desire of unjust gain having met its reward by very few of them long surviving the same'.[31] A similar exercise carried out for Bombay in 1724 led to the very clear enunciation of the principle on which the trade of India was to be conducted. The servants in Bombay could not be ignorant, the Company reminded them in the hope that it might do some good, that only the profits on trade and revenues could enable the Company to bear the annual charge of any of its settlements. If the expenses of Madras and Bengal had been anything like those at Bombay, it would certainly pay to abandon the settlements on the western coast of India than to keep them. It was only the thoughts of national interest, the trade of Great Britain, and the hopes of better times that prevented the Court from demonstrating the proof of their assertion. Even so unless the military and marine charges were reduced, Bombay could not long hope for the continuing support of the Company.[32] This letter provides a possible answer to the puzzling problem of why the Company, in view of the recurring losses on some peripheral factories, decided in the end to keep them. The clue lies in two interconnected factors, the future expectation of a large business organisation and an oligopolist's fear of competitors. Whether

it was Bencoolen, the pepper settlements of Malabar, Gombroon, or Bombay, there was the same fear, that if these settlements were given up others would tend the vineyard which the Company had planted and the elimination of its trade and competition would enable the rivals to raise the selling price in Europe and restore the profitability of a loss-making trade.[33]

The administrative costs of Asian factories were the negative side of the Company's financial calculations which sought to maximise the value of imports for a given level of exports. The pressure applied to the officials in the Indies was deliberately exaggerated to compensate for any lack of control imposed by the long distance and the time-lag in communication. But the average commodity returns in the first half of the eighteenth century were by no means unsatisfactory, nor was the Company's comment on the performance of the servants always one of censure. In 1717 the Court wrote to Madras, 'We must do you the justice to say you have taken care to make us pretty large returns and have been expeditious in dispatching our ships. We are always pleased to have opportunitys to commend and approve our servants' management.'[34] Was there any real basis in facts for the Company to make this statement? It is clear from the import figure for 1716 that the value of the goods sent from Madras was much the same as that for 1715 and much less than during 1713-14. The overall revenue from the sale of the total imports, however, was high in 1715-16, which may account for the general satisfaction of the Correspondence Committee. This example points to the obscurity which surrounded the Company's process of decision-making; the smaller details were thought not worth recording, because they were so familiar to the members of the committees. It may also point to the effect of the bias which may have existed between the decision-makers' perception of the objective facts and the true situation.

The long-term trend in the Company's exports during the four decades from 1720 to 1760 was in an upward direction. From the 1740s the growth rate accelerated and the total exports were often in excess of £*1* million a year. The treaty of Aix-la-Chapelle (1748) and the restoration of Madras to the Company's possession did much to revive confidence in India and in London. In 1749 the Directors noted with satisfaction the good prospect of a thriving investment on the coast of Coromandel and promised to send to Madras 'plentiful supplys' by every available ship.[35] At the same time there was an additional reason for strengthening the flow of funds to India. The conflict with the French in southern India had convinced the Court of Directors of the need to increase the military force of Calcutta and to improve its fortifications.[36] As it turned out, the political blow when it fell in Bengal came from a different and unexpected quarter. The recovery of Cal-

cutta by Clive and the final defeat of the nawab suddenly placed the financial resources of the Mughal treasury in Bengal at the disposal of the Company's servants. The precipitate fall in the export values during 1759-60 needs no other explanation. In March 1758 the Court of Directors was able to inform Bombay that there was no further necessity of making any remittances to Bengal as the Calcutta Council already had a flowing cash from 'the late very extraordinary Revolution'.[37] The conquest of Bengal without this source of financial reward would have been unthinkable to the authorities at home.

The system of purchasing-methods in Asia

The delicate problem of adjusting the sequence of purchasing and financing the import goods according to the requirements of the shipping schedules was forcefully described in a letter written by the Fort St George Council in 1663, 'Our business here will never be better than in a hurried condition at the time of their [ship's] dispeed because we want a Double Stock that our goods may be provided beforehand, for when money is given out in the month of February we have all the year long to embale the goods and then they will certainly be done well and to your worship's liking in all respects. But your money comes not until August or September and then it is very late to give out money for goods and a very bad times for raines. Besides the commodities is dearer and your gold and silver sold to loss because we are necessitated to turn it into pagodas and deliver it out to the merchants.'[38] This was a structural problem which could be solved only through a combination of three possible alternatives, by providing a sufficient amount of capital funds, as the factors suggested, to last over two trading seasons, by borrowing temporarily in the local money markets, or by setting up an association of indigenous merchants who would be willing to raise a common pool of finance to advance to the producers. In western India the highly developed banking and commercial services in Surat made it comparatively easy for the European trading houses to borrow the necessary amounts and the English Factory there freely utilised local loans in order to close the gap between its income and expenditure. By 1670 the Surat Council owed no less than 523501 *rupees* (Rs) to a number of shroffs and bankers, and the Company expressed surprise at the vastness of the debts and strong disapproval of the policy that had driven its affairs so deeply into the 'Usurers' Books'.[39] The Court of Committees was willing to allow its servants in India to borrow up to a limit of £10000-15000 as bridging finance. Money could also be taken up at interest as a second-best alternative to the sending of ships home half-laden.[40] But with interest charges varying from 9 per cent in Surat to 12 per cent in Bengal, the

cost of prolonged borrowing was extremely high, and clearly it was not economic to let the loans run on for more than a few months at a time. A system of borrowing with frequent repayments which was generally adopted in India not only kept up the credit of the Company but also reduced the effect of monthly compounding of interest.[41]

Of the other two methods of financing the investment, it was only in Madras that the servants succeeded in forming a joint-stock group of merchants. The question of supplying a double stock was frequently discussed by the Company at home and almost always dismissed on the ground that the Asian factories were already supplied with more than adequate funds. Even in the eighteenth century when the Directors were particularly anxious that the Bengal factories should be fully and adequately capitalised there was a considerable difference between the home estimates and those made locally about the size of the available investment funds. 'We are apt to think', the Correspondence Committee wrote to Calcutta in 1732, 'there was some mistake in the 71st para where it is said after receiving all the supplys of Treasure sent from hence and Madras, it fell greatly short of the Investment. For it appears by the calculate of Quick Stock, the value of all the cargoes consigned to us was 3,800,000 Rupees, and the Bullion and Madras Rupees only that was received at your place was 3,200,000 Rupees, besides woollen and other goods to a considerable amount, and by perusing the Cash Book, we find that the Ballance due to the merchants for goods delivered the year before was only 147,000 Rupees, so that this affair seems to be placed in a wrong light.'[42] By this time, however, the Court of Directors had come to accept the idea that Calcutta should be kept supplied with a double stock. In 1737 the Council received a reminder that the large funds sent out during the previous few years had the special purpose of enabling the Bengal servants to 'command the Markets' and beat down the price of goods. The Company had in the past paid 12 per cent for money borrowed in Bengal, and it was expected that the increased liquidity of the Calcutta treasury should make it unnecessary to have recourse to the local bankers.[43]

The capital market in India had its periodic scarcity or abundance of money supply. These variations naturally affected the ability of the European trading companies to borrow and what is more important curtailed the credit of their merchants and thus indirectly restricted the free flow of commodities. But except in times of unusual stringency, the financing of the Company's investment was never a serious problem.[44] The indigenous merchants made large gains out of the foreign business, and as long as the European ships arrived regularly with their consignment of bullion there was no shortage of lenders willing to advance money. The financial flexibility was essential for maintaining an uninterrupted time-schedule in the purchase of the import goods.

As so many letters from the Indies testified, if the factors went to the bazaar dealers after the ships had arrived they faced unacceptably high prices. There was no disagreement either in London or in India that the system of contracting for the goods well in advance of the shipping season was the most efficient and economical one, although there still remained the problem of formulating a series of operational rules that would guide the Asian factories in co-ordinating their activities with those at the home end and satisfy the economic objectives set by the Court of Directors.

The detailed instructions sent out from England and the proceedings of the Councils in the Indies on the purchasing-methods fall into two analytical types. The first problem was a static one, the task of establishing a permanent arrangement dealing with the contracts, deliveries, and inspection of the goods. The review of the best sources of supply was part of the same set, as the question came up for discussion only at long intervals once the initial uncertainties had been overcome. The second category was the recurrent problem of deciding each year what quantity of goods to order, what prices to pay, and how to adjust the level of investment to changing market conditions. With a centralised structure of executive process, comprehensive information supplied by the subordinate operational managers had a vital role to play. In 1671 when the Bantam factory was planning to develop the trade to Formosa, the Court protested that not enough information was sent and wondered that 'merchants and rational men' should behave so casually.[45] The combination of the static and the recurrent themes and the discrepancy between the Company's intentions and the failure in execution is very clearly seen in an earlier admonition to the Madras Council. 'When our Agent went from hence,' the Court wrote in 1663, 'we ordered in our Letters sent, that all subordinate Factors should as opportunity presented, advise us of all necessary Transactions happening in their respective Residencies, vizt. what sale they had made of goods consigned unto them, what investments they had made, what commodities were most requestable in their parts, with the severall quantities and prices, and all other materiall matters, which might conduce to the promoting of our Affairs, and serve for our future Government. But this our order hitherto hath taken no effect. We have therefore now written ourselves to the severall subordinates, and required their compliance thereunto.'[46] This instruction shows the two sides of the decision-making: there was a standing-rule on the supply of information, but the rules themselves dealt with recurrent events.

In these early years of commercial expansion since the foundation of the General Stock, the Company periodically sent out printed orders and rules specifying the organisation of the purchasing system.[47] The response of the servants to the Company's demand for strict adherence

to rules was invariably to plead for a greater flexibility, and ideally they would have preferred to have turned the system into an open one without the central controllers' pre-determined objectives.[48] In any case, the impact of environmental factors could not always be predicted and allowed for. As the Surat Factory protested in 1678, the shortfalls in supplying the goods ordered, at which the Court had expressed concern and disappointment during the previous season, could in no ways be prevented. Not only was the Company's regular business in the various factories greatly disrupted by violent rains and floods but the wars which 'have generally reigned in these eastern parts of the world for a long time' had so impoverished the people that the great decay of trade was hardly credible.[49] If this was the most common reason put forward from India for deviation from commercial targets, the Company on its part was inclined to suspect deliberate negligence or even open frauds. Extracting compliance from subordinates enjoying a greater measure of de-facto political power in the Indies than the Court of Directors themselves did in England was not easy. The members of the Directorate were not free from internal factions and some of them were deeply concerned in promoting and defending the welfare of servants who had been appointed to the Company's service through their patronage in the first place. Another aspect of the problem was the possibility of a collusion between the Indian merchants and the English agents which resulted in inflated invoice price of the Company's textiles. It seems that the members of the Court of Directors were strangely insensitive to their own position as monopolists and never realised that a challenge to the monopoly rates of profits earned by the Company could be posed by the conduct of their own servants.

The perennial problem of controlling its officials was equalled by the Company's constant fear that the traders in India and other parts of Asia might acquire too great a hold over supplies. The shrewdness and subtlety of the textile brokers and merchants, when they did not practice downright cheating, had to be combated perpetually if the price and quality were to be kept under control.[50] By encouraging all merchants, great or small, to sell to the Company, it was believed, a truly competitive situation could be created at the supply end and a dangerous concentration of economic and even political powers, such as that acquired by the great Bengal merchant Mathuradas at the end of the seventeenth century, prevented.[51] The benefit of competitive trading could not of course be denied by the servants in India, but on the system of buying the goods through the brokers, they had an answer ready at hand. In 1696 Samuel Annesley, the Surat President, wrote, 'It has been the policy of the Brokers by degrees to settle in all places of the Investment their relations and creatures to carry it on ... whereby they have done in a manner what they pleased, and it is your

Honour's true interest (as I presume) to take the quite contrary measures, and little by little to dysplace them . . . It has been the ancient customes of the Indians to make all bargains by the mediation of Brokers, all Forreigners as well as the natives are compelled to submit to it: the Armenians, Turks, Persians, Jews, Europeans and Banyans.'[52]

Annesley's statement may provide a possible explanation for the long survival of the brokerage system in the provision of the Company's import goods. In organising the supplies the servants in India were under pressure to reconcile a number of different aims which were not always mutually compatible. The price had to be the lowest in the market but the quality kept high. The deliveries were to be regular and punctual and yet the Company reserved the right to make last-minute changes in the orders. All commercial risks were to be borne by the Indian merchants, and if the latter made a loss on the Company's business they were still expected to carry on contracting for goods as before.[53] Without an intermediary or a group acting as intermediate agents, it was impossible for the Indian factories to function efficiently under reference terms as wide as this. There was also the added disadvantage that few European servants of the Company knew Indian languages well enough to conduct business in the interior of the country, and it proved very difficult, largely because of the reluctance of the officials themselves, to build up a continuous tradition of linguistic skills and local commercial expertise which would have dispensed with the necessity to employ Indian middlemen.

The shipping schedule

It was no accident that in the Company's outward letters information and instructions on shipping movements occupied the first heading. On the efficient utilisation of the ships depended the entire commercial success of the East India trade. Apart from the time-table connecting the different parts of the organisation in Asia and Europe, the point that continually taxed the ingenuity of the Committee of Shipping and the Councils in India was the allocation of relative tonnage to three separate operations, the direct voyages to and from Europe, the inter-factory traffic, and the port-to-port trading in the Indian Ocean. A mistaken decision or a general miscalculation over a longer period could easily create serious imbalances and lead to costly under or over capacity in tonnage available for the main part of the programme, the direct European voyage. The effect of the first was a shortfall in the volume of saleable imports, causing a distortion of the market and the loss of revenue; that of the second, to raise the unit cost of goods through half-laden ships coming home. Since weather fluctuations were purely random and impossible to predict in advance, it was

inevitable that regular time-tables would sometimes break down, and it would be necessary to allow sufficient margin in the operation plans to take account of the unforeseen. By combining rational calculations with experience, the Company was able to devise a series of ground rules which first isolated the physical constraints and laid down the optimum solution and then listed the next-best alternatives in the case of the programme threatening to go off the target.

For example, the global wind system required the Europe ships to depart for the Indies not later than early spring with an even narrower limit in the timing of their dispatch home. A definite date was suggested in the standing instructions beyond which the servants in Asia were not theoretically permitted to delay the ships. But it was obvious even to the Court of Directors that, if the goods for shipment were not ready, there was a cost to be incurred by blind compliance to the standing orders. In this case, there were three choices open to the President and Council, each with an associated matrix of pay-off. They could send the ships back with whatever goods that were ready within the specified time. They could delay them beyond latter in the hope of completing the lading, or the voyage could be cancelled altogether and the ships retained in the Indies until the next shipping season, to be employed in local freight voyages. It can be seen that each alternative included an uncertain and a certain part, a stochastic element whose boundary was definitely limited by a decision-rule. For instance, if the second alternative was chosen as the best possible course, the stochastic element is symbolised by the expected volume of goods that could be procured in the immediate future while the decision-rule is given by the absolute limit of delay beyond which in the opinion of the ship's captain it was unsafe to go. As in the case of timing the arrival and departure of ships, so in allocating the volume of shipping a similar process of logic could be applied.

The two main considerations in arranging the shipping schedule were, naturally, to minimise the turn-round time and to maximise the utilisation of loading space. A balance had to be kept also between the high-value and low-value goods shipped in any single bottom in order to reduce the risk of shipwreck and at the same time prevent too many 'gruff commodities' being returned.[54] As the final date of departure the Company suggested 10 December for western India and 10 January for the coast of Coromandel. What the Court feared most was that a delay in dispatching the ships might cause them to miss the trade winds at the Cape of Good Hope or that they would arrive home during the winter.[55] The instructions given to the Surat and Madras Councils in 1675 illustrated the general plans the Company made for its annual shipping. In March the Court advised the Surat Factory to make ready a suitable cargo worth £10000 for Bantam, and letters referring to the

matter had apparently been sent already by overland post. When the ship *Unicorn* arrived in India, she was to take in the lading at once and be ready to sail for Bantam by October so as to arrive there by the middle of December, 'for we would willingly have all our ships dispeeded from their last lading port in India by the tenth of January, we having paid dear for ships attempting to come late about the Gape, which as we have formerly said we would have as a standing rule amongst you'. This particular ship was to sail on time even if she lacked some part of her cargo.[56] On the other side of India, the Fort St George Council was asked to compute at the first arrival of the ships the amount of tonnage that could be supplied from Madras and Masulipatam and then write to the Bengal factories to make up any possible deficiency.[57] The success of the Indian settlements in following these administrative directives can be verified. To take a single example, in 1679 the Madras Council met on 13 January to consider what steps to take in view of the serious delay in the shipping time-table. The limiting date of 10 January had come and gone and yet none of the four ships scheduled for Europe had returned from their subsidiary voyage to Bengal and Masulipatam. As the charter-party date was already expired, the members decided to detain the ships in the Madras road until all of them had taken in their full lading of goods. 'The reasons which induced the Councell to this result', the Diary recorded, 'were to prevent the great damages by dead freight and want of returnes which would ensue, should the ships proceed directly for England without taking in the goods provided at this place which amount unto about 550 tons and 150,000 pagodas.'[58] By 1 February all the ships were ready to sail, and the Madras officials drew up a complete abstract of all the goods, the total tonnage, and the value of the cargo sent home, comparing their figures with the instructions received from the Company. According to this abstract the Madras Agency had done extremely well in its disposition of the shipping tonnage and the provision of the return cargo, in spite of a month's delay in the time schedule. For instance, in 1678 the Europe ships had brought out in bullion and goods £226737 and their chartered tonnage was 2003. As against these figures the three settlements of Madras, Masulipatam, and Bengal returned 2017.5 tons of goods valued at £234641.[59]

It was not always that the outcome of accidental delays and calculated risk-taking turned out to be so favourable. In 1697 the Madras Council found it impossible to predict whether sufficient goods could be provided by the Coromandel factories to lade fully two large ships which were on their hands. 'There is not a certainty (though a fair promise)', the Consultation for 28 June noted, 'of getting a sufficient quantity of cloth from the Fort St. George, Fort St. David *[Cuddalore]*, and Vizagapatam merchants to make up a competent lading for the

Sidney in due time to accompany the *King William*, If the merchants shall bring in a sufficient quantity there remains a double uncertainty of the expected bales of Vizagapatam, yet the time of her returne in August and September is uncertain.'[60] It was decided to send the *Sidney* to Bengal in the hope that she might be able to take in a cargo there, but the preparation for the provision of goods in Madras was not to be slackened in case the ship lacked part of her total tonnage. The problem of the non-utilisation of shipping time or space was in fact an endemic one throughout this century. In 1722 the Company estimated that the detention of the ship *Desbouverie* without any compensating freight voyages cost £5000 in just demurrage payments. There were very strong complaints during 1734-5 that the Company had suffered great financial loss by ships either losing their passage at the Cape or not being sent home at all.[61] But in 1740 the Calcutta Council earned special commendation for following an exemplary time-table. The punctual despatch had not only caused the homeward-bound ships to reach home as planned, but also the ships bound for Madras, Bombay, and Bencoolen had reached their destinations on time.[62] With more than fifty ships on the high seas, a number that was an average one for this time, the anxiety of the Court of Directors is readily understandable, and there was always the dreaded overposting of the ships that were already on their way home. The financial loss suffered by the East India Company in shipwrecks was never very serious; but the psychological impact of a ship lost with all her men and cargo was one of profound distress, and in every outgoing letter the members of the Correspondence Committee recorded their formal thanks for being spared this ultimate calamity.

Communication and control

The effective control of the Company's trading system depended critically on the proper functioning of the communication structure which in its turn raised problems of both time and space. A complete operational cycle calling for a minimum period of sixteen months, the time taken for a ship to perform the round voyage from London to Asia and back, also involved a distance of over 6000 miles. If the provision of silver is taken into account, the time-cycle extends indirectly to thirty months and its spatial measure would stretch from the New World to Asia. The rhythm of activities within one cycle was of course fairly regular, but if a random occurrence disturbed the pattern in one cycle its effects could last over many cycles. The main function of the communication and controlling mechanism of the Company in such a situation was to take counter-measures to bring the system back to stability. It is only when one examines the delays, accidents, and the

general uncertainties of mail that the true perspectives of the distances facing the merchants of the early modern period are fully seen. Letters sent by both ships and couriers were at the mercy of all kinds of hazards. The delivery on board the ships of the Company's packets of mail was the final signal for the East-Indiamen to get under way; but contrary winds could hold them back for months. The delay was often utilised to send supplementary letters. 'We have writt you largely by these ships,' Sir Josia Child writes to Madras in 1683, 'but whilst they are in the Downs something new will daily occurr, fit for you to know, which you shall be accordingly advised of.'[63] Half a century later the Court is writing to Bengal, 'this ship having been so long detained by the silver's non-arrival from Holland, we have now the opportunity of sending you the following advices . . . The frost in Holland and contrary winds since it broke up have been the occasion of this ship's late dispatch.'[64]

There were two aspects to the Company's approach to the use and organisation of its information system. It was an aid to management, an indispensable condition of decision-making. It was also an instrument of power and authority. The hierarchy of information channels was just as important to the process of control as the formal structure of management responsibilities. Common to both was the physical problem of arranging information in such a way as to transform it into intelligence. Information sought by the Court from its servants in Asia falls into several categories and levels. The area specially singled out naturally concerned the different branches of the Company's direct European trade. The amount of money invested in respective factories and trading areas, abstracts of all debts and credits, goods remaining in the warehouses, and the estimate of stock required for future investment were all listed under the category of essential commercial information.[65] But in 1703 both Madras and Calcutta were asked to advise the Company not only on its own trade but also on that of all foreign nations in India in order to compute 'as near as we can . . . the quantityes and qualityes of the several sorts of goods yearly brought into Europe'.[66] As the Company's trading empire expanded, so did the coverage of information. So great was the volume of papers sent home annually that the Correspondence Committee often had difficulty in finding the time to read them before replying to the letters from India.[67] The standaid practice in London and in Asia was to prepare abstracts of all letters, rules, and standing orders as guides to policy.[68] This avoided the necessity of going to the voluminous original documents each time. The instructions given to Sir John Gayer in 1692 on his appointment as the Chief of the Surat Factory were said to be only a summary of the Company's general policy and for full information he was referred to the registers of letters kept in the various factories in

his area of authority. In order to save his time, the Court commented, if 'our said General Letters be not already briefly noted in their respective margins, we would have you command some of our factors to do that presently that by a short view of their contents you may the readyer observe what is fittest for your further reflection and consideration'.[69]

A strict evaluation of the information received from the Indies was one way of exercising control over the internal operations of the Company as well as the environmental inputs. Obscure or insufficient communications provoked severe censure. In 1661 the Company complained that the letters from Bengal were full of obscure and unintelligible references to events, 'as if because they know these things, it necessarily follows that we must also, though at so great a distance'.[70] The Company had a chronic suspicion that the true state of its commercial and financial affairs in the Indies were being deliberately concealed or distorted by the officials, and the only way such a practice could be held in check was by evaluating the reports received from other settlements where the servants had reason to remain neutral.[71] That the possession of information was the same as the possession of effective power was a deduction which the Company had no difficulty in making. In 1670 the Court drew the attention of the Madras Council to the fact that a great deal of internal disputes among the factors were caused by the free access they had to the general register of letters. In future the Letter Books were not to be made public and senior servants who were permitted to read them were to keep their contents secret.[72]

More than half a century later the Company is still warning the Bengal Council that all commercial orders should be treated as confidential and the Indian merchants who supplied the goods must be prevented from gaining any economic advantage by being informed of the Company's intentions beforehand. To prevent leaks no black servants were to be employed in the Company's offices or in the counting-house.[73] Any alliance of interest between Indian merchants and the European officials of the Company was potentially dangerous. When Monackji Nowroji, one of the Parsi brokers whose family were large creditors of the Company, came to England in 1725 and threatened to sue it for non-payment of debts, the Court of Directors was surprised to discover that he had a duplicate set of the Bombay account books in his possession clearly showing the credit balances standing in the family's name.[74] The private correspondence of Robert Adams, the ex-Chief of Tellicherry, proves that he was regularly writing to Tomby Chitty, the great Madras merchant, and to Vishnudas Seth, the official broker of the Company in Calcutta.[75] Adams was a valuable informant not only to these two Indian merchants but also to other servants of

the Company in India on the politics of the East India House. In 1730 when the Court of Directors was heading towards an internal crisis, Adams wrote to a correspondent that he was finding it increasingly difficult to learn anything of 'their designes nor what they intend to write' because everything was kept secret.[76] The Directors on their part discovered from early on that their officials refused to accept the role of mere subordinates which the Company had assigned to them in its organisational hierarchy. Sir Josia Child put his finger at the heart of the matter in a letter written to Madras in 1687, 'The great trouble we labour under is that you cannot get out of your old formes, and your cavelling way of writing, or perverting or misconstruing, procrastinating or neglecting our plain and direct orders to you, as if you were not subordinate but a coordinate power with us, which has and will (till you conforme to our known minds and intentions) force us to make more changes in your Council than anything else could have induced us to, of which we hope we shall hear no more hereafter.'[77] But this was a problem that in the end proved virtually impossible to solve, and the disgrace and dismissal of one President after another during the first half of the eighteenth century only pointed to the equal determination of the Company's servants to be a 'coordinate power' and claim a part share of the monopoly profits enjoyed by the organisation at home.

5
LONG-TERM TRENDS AND FLUCTUATIONS 1660-1760

Methodological issues

The survival of the East India Company's account books from 1664 onwards makes it possible to reconstruct a complete quantitative picture of its main trading activities. The methods and the techniques of this reconstruction are discussed in some detail elsewhere and need not detain us here.[1] However, it may be permissible to raise a fundamental question that will also concern us when we turn to an examination of the Company's financial history. It was noted earlier during the discussion of the theoretical model of the Company's trading system that its general controllers in London possessed a highly developed sense of corporate history.[2] The careful preservation of historical documents, the frequent searches for past information, and the use of statistical data for periods often as long as thirty or forty years were all an integral part of a central decision-making process.[3] To take some specific examples, in 1668 when the Company was considering the reopening of trading relations with Japan, a special committee was set up to examine the available historical evidence on the Far Eastern trade going back to the first half of the seventeenth century. The abstract of prices paid for imported goods and the quantities sold in the auctions, which are to be found in the papers of the Committee of Correspondence, indicate that statistical time-series had a monitoring role in the daily process of executive decisions.[4] Finally, there is the curious episode relating to the purchase of a bond bearing the Company's seal by the Surat Factory in 1739. The date of the bond was 1692 and it was alleged to be undischarged. In order to save the Company any possible financial embarrassment, the Surat Factory paid Rs 6000 to repossess it and claimed a gratuity under a standing instruction going back to March 1708-9. Predictably enough a furious Committee of Correspondence replied by sending back to Surat complete copies of the factory's account book for 1695 which showed that the broker in whose name the bond has been issued had been repaid very large sums of money. As for the claim for a reward, the Committee wrote, 'It is no small matter of surprise to us to observe this claim is made by virtue of the aforesaid paragraph (of our Letter dated the 11 March

1708-9) as if the same reasons still subsisted for our allowing gratuitys to our servants as there were before.'[5]

Given this type of organisational structure, it would be natural for us to expect that the Company itself would have regularly put together the detailed and the massively disaggregated statistics contained in its account books and constructed annual time-series for at least the most important economic variables such as the total imports and exports, sales, profits, and costs. But we would have been wrong. Surprising as it may appear, there is no surviving information of this kind in any of the Company's records. The only quantitative information that one can find in abstracted form are either the rough notes prepared by the accountants for the use of the Correspondence Committee or reports submitted to parliaments and the government when matters touching the Company's political and economic interests came up for public review.[6] It seems clear that an organisation that was responsible for the creation of one of the most thorough, comprehensive and astonishingly detailed systems of information and records was not interested in an elementary exercise that would be considered as the first routine requirement of any modern large business firm.[7] The collection of quantitative data on an annual and aggregate basis appears to have been undertaken only when the occasion demanded it.

This lapse or hiatus in the Company's organisational procedures poses a dilemma for the historian. Are we to infer from it that the decisions of the managerial committees on the overall volume of trade were based on a short time horizon, perhaps no more than three to five years ? If this conclusion is correct, then by creating our own yearly time series and subjecting them to various forms of statistical trend analysis we may be guilty of distorting the historical reality, of imposing on the past ideas and concepts that were totally irrelevant. In order to resolve the dilemma, it is essential to know in what form time as an independent variable entered into the Company's economic calculations. For example, it is known for certain that the profitability of a particular commodity imported from the Indies was always reckoned after discounting the net revenue from sales by the current interest rates against a time-span of two or three years, the exact period being determined by the start of the investment and its final conclusion. On the other hand, for permanent features of trade such as the loan of the Company's subscribed capital to the Crown, which was never redeemed, time disappeared altogether. The receipt of the quarterly interest on the loan from the Exchequer can be seen as a seasonal process that repeated itself endlessly from year to year. However, these are simple problems, and the explicit role played by time in these cases makes it easy to derive the correct answer. For total exports and imports or price series, it is much more difficult to ascertain how time influenced the Company's

decisions. There is evidence to prove that when the cost price of Indian textiles or any other imported article showed a sustained increase over a number of years the Court of Directors drew up relevant price tables for fairly long periods of time in order to study the general trend.[8] Whether a similar kind of analysis was used to predict the long-term movements in demand for the Company's trading products cannot be answered positively. The committees concerned must have been aware of the structural shifts and changes in the market that manifest themselves in the shape of long-term trends amidst short-term contradictory movements. The explosive increase in the demand for cotton textiles in Europe during the second half of the seventeenth century can be cited as an obvious example. A trend line drawn through the annual exports and the direction of the deviations from the trend also demonstrates the operation of short and long period factors in the Court's annual decisions (see Figure 6).

The questions raised so far are important for a complete understanding of the mechanism that gave rise to the time-series under study. They are concerned with problems of causality and the functional relationship between different variables. It is important to bear in mind the different levels at which changes can occur. All economic concepts formulated in quantitative terms incorporate a simple element, a single variable such as the price, quantity, or value.[9] When these variables are combined together in a functional form, they can be said to constitute a mechanism which again may be embedded in a larger structure with overriding facilities, as for example the Court of Directors with its powers to take all final decisions. A number of structures combine to form a system of production and exchange. The whole economic scheme presented in this way conforms to the familiar distinction in theoretical analysis between the partial and general equilibrium approach. It is also evident that quantitative indicators can be devised for measuring the performance and behaviour of elements in all four levels without first postulating a causal model. The advantage of the latter method is that it is a purely analytical exercise carried out with theoretical tools not available to the men of the time. Its object is no more than to establish the basic tendencies of the past quantitatively in terms of its own recognisable parameters. After this basic foundation is laid, we can turn to qualitative evidence for further illumination.

Movements in total exports and imports

For the East India Company's trade the two most important variables requiring initial analysis are of course the total export and import values. There are some preliminary observations that can be made about the time-profile of the two series. The first striking point is

the very rapid development that took place during the years from 1660 to 1700. Although the Company had been trading continuously with Asia for more than half a century, during the Civil War and the period of interregnum its commercial fortunes had declined to such an extent that in 1660 the level of its overall trade was no higher than what was in the first half of the century.[10] The Company in reality began a new existence with the charter of 1657. The modest size of the capital investment with which the new stock started its trading operation naturally tends to exaggerate the percentage rate of growth, because of the small base.[11] But even in absolute terms the Company's financial progress was impressive and comparable to the level achieved by the V.O.C.[12]

The second feature to deserve notice is the apparent similarity in the movements between export and import values with a time lag of about two years (see Figures 3-6). As the main function of the exports was to provide working capital for the Asian settlements and trading stations, the correspondence between the two series should not perhaps come as a total surprise. An increase in the level of exports represented a rising demand for Asian imports on the Company's part, which eventually transmitted its effect on the import values received in London. It seems reasonable also to assume a time-lag of two years, because the system of procuring the imported goods interposed an interval of twelve

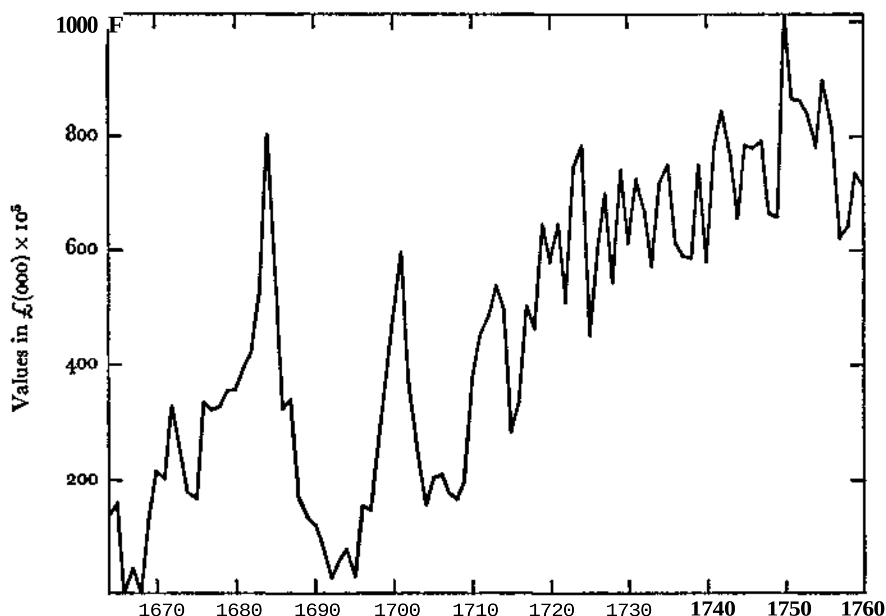


Figure 3. Total imports.

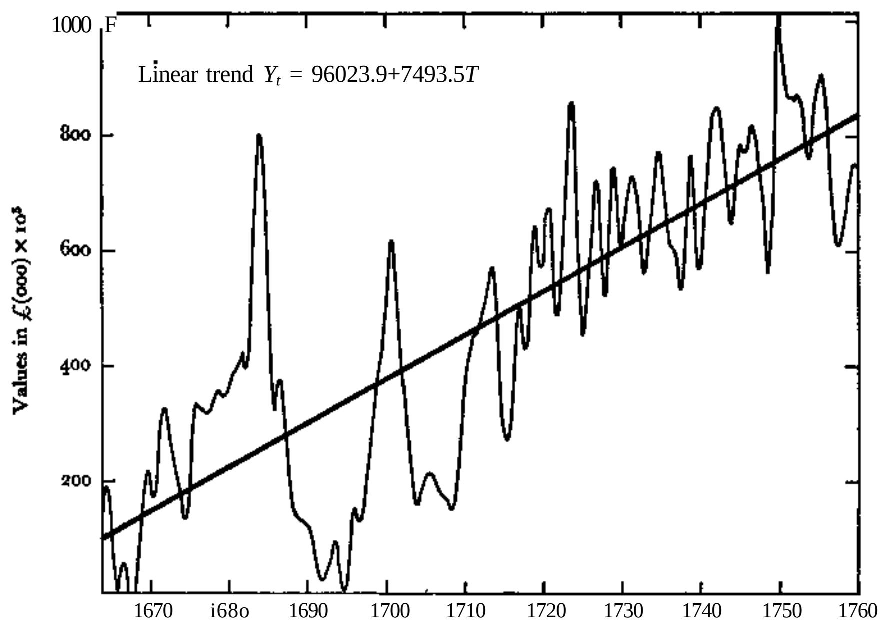


Figure 4. Total imports: polynomial and linear trend.

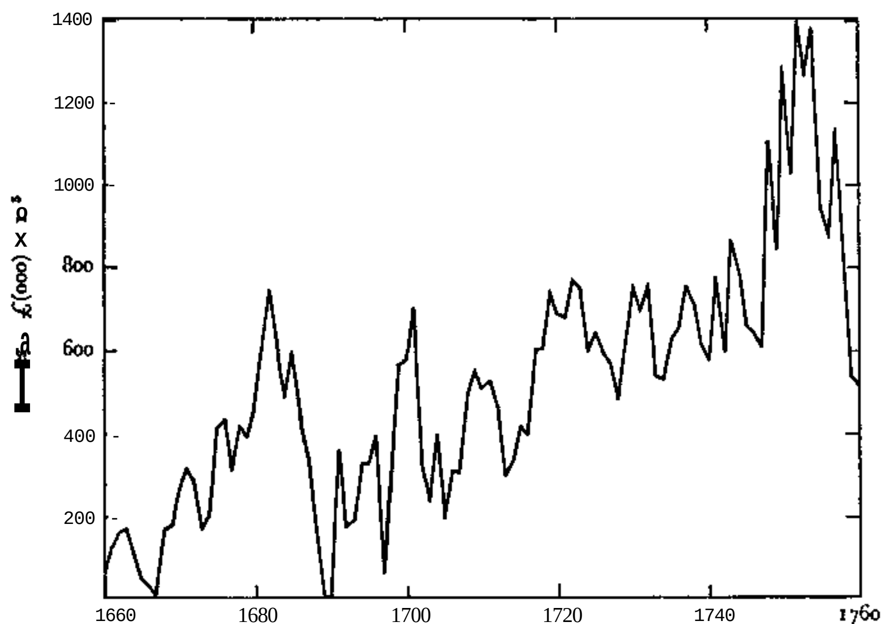


Figure 5. Total exports.

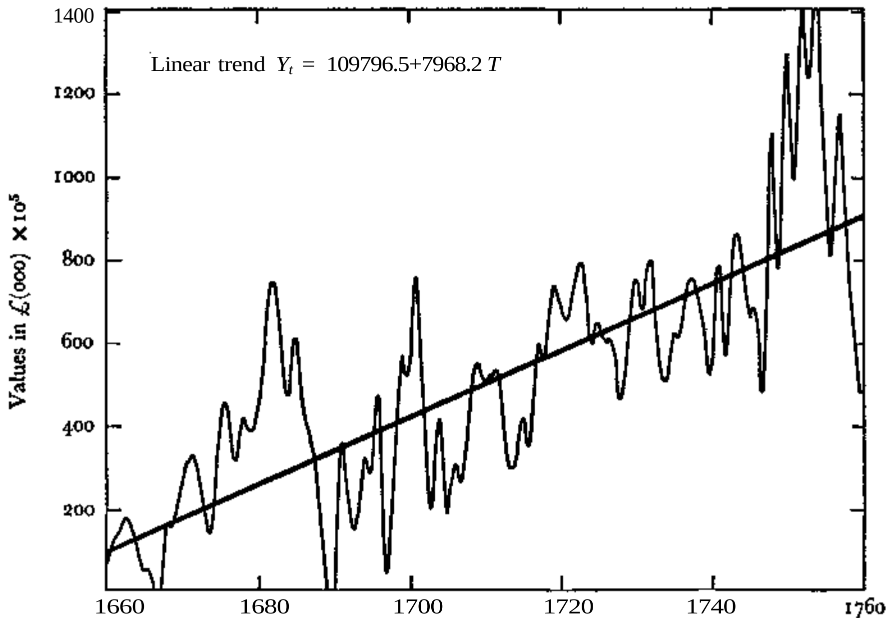


Figure 6. Total exports: polynomial and linear trend.

months between the time when the exports arrived in the Indies and the imports were returned home.[13] But if there was a quantifiable relationship between the two series, its exact degree and nature should be measurable in terms of established statistical procedures. This is attempted in the scatter diagram depicted in Figure 7 and in the form of a simple regression equation. It is apparent from the pattern of the scatter points that these lie within a fairly broad band rising from the left to right. This result may be interpreted as an indication that the association between exports and imports is not an exact one, otherwise the points would have been much closer together. But it can be concluded from the scatter diagram that, in general, high values in exports are associated with similar values in imports. The width of the band along the horizontal axis measures the variations in the export values for the same level of imports, while its height shows the opposite pairs of values. It seems that the dispersion of the exports increases rapidly at the higher end of the vertical axis as compared to the middle or the lower end. In other words, by expanding its exports beyond a certain point the Company could not expect to increase its total imports. There were either institutional rigidities or random occurrences such as wars in India which absorbed the additional finance provided from England. While the scatter diagram measures the absolute size of the dispersion for every pair of export and import values, the second statistical test -

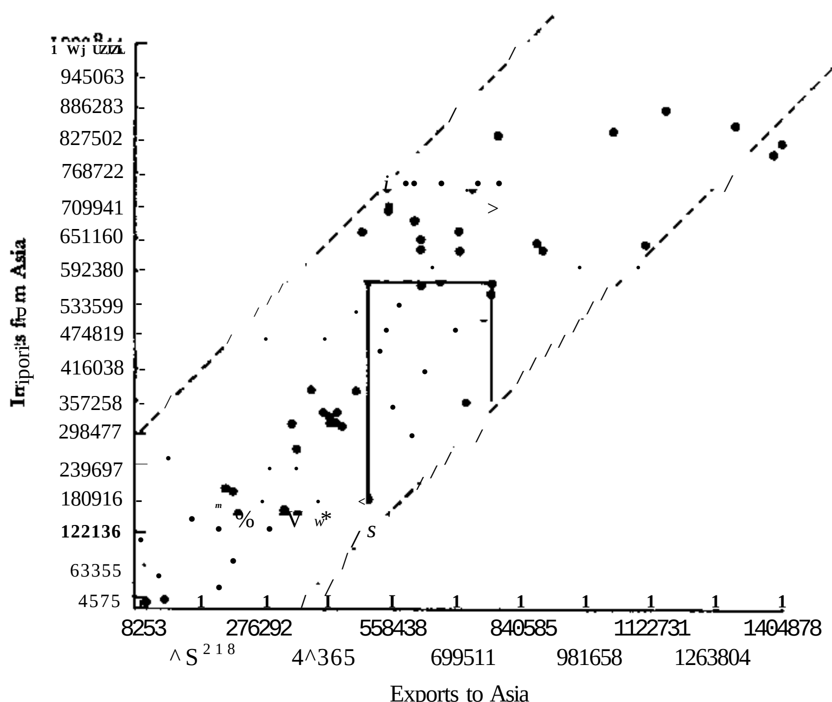


Figure 7. Scatter diagram of imports against exports: 1664-5 imports plotted against 1662-3 exports.

the regression equation of imports on exports presented in Appendix 2 - indicates in terms of a single average value the proportion of changes in imports that could be ascribed to changes in exports for the period as a whole. The result confirms the visual conclusions drawn from the scatter diagram. If the value of exports change in our period by 100 per cent, the equation predicts that the value of imports would change by 73 per cent two years later. It also shows that 70 per cent of the annual fluctuations in imports can be attributed to changes in the level of exports in a previous period. However, some caution is needed in interpreting these results. When the model is tested further for any possible structural weakness implied by the assumption that changes in imports are a function solely of changes in exports, it is seen that such an assumption is in fact not very realistic. Hence there is some bias in the measurements, and the influence of the exports is probably exaggerated in the regression equation. (This problem is investigated in our analysis of the structural model in Appendices 2 and 3.)

The quantitative techniques used so far examine the interdependence of the two series in order of values without explicitly taking into account the temporal changes in each series. When we turn to an

investigation of the latter problem, we are at once faced with another set of initial questions that need resolving. For example, we need to know before we begin our analysis whether the time-series is a stationary one with purely random or seasonal fluctuations or whether there are possible elements of cycles and long-term trends in it. The choice of appropriate statistical methods depends on the answer to such questions. A visual inspection of the graphs of the Company's exports and imports (Figures 3-6) proves that there are marked trend components in the series with short-term oscillations, that may or may not be cyclical in character. The two statistical techniques selected in our study were dictated by the need to analyse these observed characteristics, and their mathematical properties are discussed separately in Appendix 2.

The analysis of trend demonstrates conclusively that for the whole of our century both exports and imports exhibit strong upward movements. According to the linear trends, imports expand by £7493 each year and the exports by £7968 (see Figures 4 and 6). The compound rate of growth, on the other hand, is 2.3 per cent for imports and 2.1 per cent for exports. An intuitive meaning can be attached to these figures if we remember that they suggest that, had there not been unpredictable disturbances in the form of wars, harvest failures, storms at sea, or financial crisis followed by periodical rise and fall in demand, the Company's trade would have steadily expanded by the amounts indicated above. Alternatively, we can say that no matter how strong is the effect of a particular recession, after each crisis had made its impact felt, the overall direction of trade would eventually take an upward path. The sceptic might ask how much confidence should one attach to the predictive value of these assertions. The various tests performed to measure the significance of the results show that on the whole the assumption of a linear trend running through the individual annual values of the two series is justified. But the linear model provides a better fit to the data than the exponential growth curve.

Before we turn to an analysis of the short-term fluctuations and other oscillations, it will be convenient to see whether there are any marked variations in the secular trends over shorter segments of time. The three-year moving-average process (the third-degree polynomial trends depicted in Figures 4 and 6) yields four clearly recognisable periods: 1660 to approximately 1683, ^84 to 1699, 1700 to 1724, and 1725 to 1760. When trend lines are fitted to the data in the four periods, very striking results appear. For the first phase the rate of growth was truly phenomenal. Imports expanded by £25430 a year according to the linear model and by 14.4 per cent according to the exponential. The expansion of the exports was at a similar rate, though at a slightly lower level. But the subsequent period, the last two decades of the

seventeenth century, was one of great crisis in the Company's trade. The magnitude of the decline, even though it was followed by a strong recovery towards the end, actually turns the trend line into a negative one. However, the statistical fit of the data is extremely poor, and one must conclude that for this particular period the trend analysis is not an appropriate one. From the turn of the century to the middle of the third decade, there is once again rapid progress. But because the trend line joins together two oscillations with deep troughs which occur during the War of the Spanish Succession, it gives an impression of a weakening tide. The imports grow at an average rate of £16084 a year and exports at £12716. The corresponding compound rate of growth is 4.1 per cent and 2.8 per cent, respectively. It is significant that for both the series the third phase ends with the moving-average curves above the peak reached in the early 1680s. The expansion of these latter years was in many ways a record, inspired by abnormal commercial conditions. Neither the Company's servants in Asia nor the Court of Committees in London believed at the time that in absolute terms the volume of trade could be maintained at that level for too long. It took nearly forty years before the rate of expansion succeeded in catching up with the figures of the earlier decade. In the last period, the growth slows down considerably, particularly for imports which had a higher growth rate than the exports in the previous three phases.

One of the reasons for the slowing down of the Company's trade was of course the fact that the starting point of the last period was at a much higher level than that of any others. Even so the general level and movements of the time-series create the impression of the stability reached in these years, relative to the violent up and down swings of the previous century. There is a possibility that in the existing economic conditions in Europe some sort of ceiling was being gradually reached. The East India Company after all was a monopoly organisation, and it was only a decade or so from the end of our period when the critical mind of Adam Smith would bring to public notice the restrictive nature of Europe's Asian trade carried on by means of exclusive chartered companies.[14] However, this is mere speculation, as all causal explanations of historical phenomena become at a fundamental level. What is certain is that after 1720 the amplitude of the peaks and troughs in the Company's trade become smaller. At the same time there is a tendency for the number of complete movements from one trough to another to increase within a given period, though care must be taken not to confuse the short and irregularly spaced fluctuations with longer movements which may not properly belong to the same category of generating mechanism. As a reason for the accelerating speed of the shorter movements during the first half of the eighteenth century (see Figures A.2.1-A.2.2, pp. 480-1), it may be suggested that, as the

trend component in the annual values weakens, the random elements, and the oscillating ones if any, become proportionately more important. Our graphs reveal that from 1660 to 1705 English trade with the Indies went through two long movements. For imports the first one lasts from 1660 to 1690, a period of 31 years; for exports from 1665 to 1688, or 24 years. The second long swing was shorter, from approximately 1690 to 1705. Between 1705 and 1760 there were at first two oscillations of 10—14 years' duration. These were followed by a number of short fluctuations lasting from 3—7 years. In the case of imports we can count 7 complete movements from the early 1720s to 1760, some of them as short as 4 years.

The irregularity of the movements makes it difficult to suggest the exact nature of the systematic and permanent mechanisms which were their root cause. Specifically, were they business cycles or merely the sum of the random components of the time-series produced by the moving-average process? An alternative way of looking at the same problem is to see whether there is a definite regularity in the observed movements of the time-series in question and then to examine the generating process which gives rise to them. In our analysis, following the definition suggested by Braudel and Spooner, a cycle or an oscillation is defined as a double movement in upward or downward directions. The distance between one trough and another measures its duration and the height of the peak its amplitude.[15] It should be noted that this definition avoids the suggestion of a regular periodicity and makes no assumption about the generating mechanism. In an industrial economy with its overwhelming emphasis on fixed capital as a means of production, cyclical movements can occur in total economic activity as a result of the time-lag between capital investment, rise in output, income, and consumption. Hence in capitalist systems there is an inbuilt tendency towards regular business cycles. Such a reasoning cannot be suggested for a pre-modern economy of the type with which we are here concerned. As a first step towards an understanding of the problem, it is necessary to make a distinction between the aggregate economy and its component parts. The latter may contain an economic mechanism that generates a cyclical time-series, but it does not necessarily follow that the behaviour of the overall system was responsible for the creation of such regular oscillations.

As the East India trade was primarily a function of business decisions taken by a distinct group of merchants, the explanation of its recorded movements must be sought in the factors which influenced those decisions. Here again account must be taken of the endogenous and exogenous factors at work. The internal operation of the Company followed a sequence which was more than likely to give rise to an oscillating pattern in its overall trade. To see this we have only to con-

sider the time-interval between the beginning of an investment cycle when the ships are sent to the Indies and its conclusion when they return with the goods ordered. At its shortest the interval was sixteen to eighteen months and at the longest three years. A new investment period would begin before the previous one was completed, and its level would depend not only on the current market conditions but also on the sales revenue, capital resources at the disposal of the Company, and its forecast of future financial returns on investment, which are all directly related to the volume of imports at a preceding period. On the other hand, if an external shock of some kind threw out of balance the predicted level of trade, the management would strive to bring the system back to equilibrium, though the economic effects of such disturbances would presumably be felt for some definite period. For the Company's internal operations, it may be suggested that a process very similar to the modern business cycles was at work. So long as there was a time-lag and an inexact relationship between the orders sent out and the quantities received, the dynamic sequence of the imports at least would have assumed a cyclical pattern even without the secondary effects created by the variations in sales. Through the linkage between exports and imports, the oscillations could have been transmitted to the export series. This type of relationship can be studied mathematically with the help of difference equations. The fixed coefficients of a second-order difference equation, for example, would determine whether the system was converging towards an equilibrium, exploding, or oscillating with a stationary amplitude (see Appendix 2 for a further discussion).

The purpose of these theoretical considerations is to demonstrate that there is a variety of ways in which oscillations could have occurred in the Company's trade. The actual circumstances influencing the main phases of the commercial operations were always reviewed and discussed at some lengths in the annual letters to the Asian settlements. From this information it is possible to trace the systematic policy decisions and the random chance elements which led to an expansion or contraction in the volume of trade. By comparing the changes in the annual time-series with the comments and observations of the Correspondence Committee in London and the Asian Councils, we can test the validity of the statistical results and the Company's perception of the actual situation. The policy decisions continually interacted with the real inputs emerging from the trading system. In their Surat letter of 27 March 1661, the Court of Committees announced that the Company had decided to withdraw many unnecessary and expensive factories in western India. The reason given was the general discouragement felt by the shareholders at the losses suffered by the new stock, which after three years of flotation was still selling at 85 per cent. At the same time, in a characteristic spirit of entrepreneurial optimism

the Committee declared that the essential retrenchments being made they 'shall make it our endeavour to drive a full and a large trade yearly out and home'.[16] This statement provides a forceful illustration of the way in which the strong undercurrent of a rising trend ran beneath the short-term and often contradictory movements. The paradox of a constant and linear growth rate moving in only one direction, even in years when the actual values are falling, is resolved by the discovery of concrete evidence proving that merchants are capable of taking simultaneously a long and a short view of market conditions. Under the impact of short-term factors the volume of trade might take a downward turn for a number of years; but when the economic climate improved, its effect on the absolute level of growth was proportionately greater than in the preceding period.

The index of volume, aggregate prices, and the measurement of terms of trade

In the above analysis, it has been implicitly assumed that the movements in values reflect real changes measurable in terms of volume. It is now time to examine the validity of this assumption, and to decompose the two series into the relevant component parts. In Table A.3 are presented the indices of aggregate volume of trade and prices, together with an index of silver price in London. The construction of these indices presents no particular problem, and the method followed is that of base-year weights. The only two indices requiring some explanation are the ones labelled 'terms of trade'. In normal usage the expression 'terms of trade' measures the ratio of aggregate indices of export to import prices. The index given in column 8 of Table A.3 attempts to measure this ratio and its changes over time. For the exporting country a high figure on the scale indicates that a smaller volume of exports is necessary to buy a given amount of imports and therefore it is a real economic gain. From the point of view of the Company an index of the conventional terms of trade had only a restrictive meaning. This can be understood if we remember that the East India Company was both a buyer and a seller in Asia as well as in Europe. In order to calculate the true terms of trade between its exports and imports we need two additional indices, the prices at which its export commodities were sold in Asia and the selling price of its imports in Europe. An index of the aggregate selling price for imports can be easily constructed by deflating the total sales revenue by the volume index, but gaps in the data make it difficult to derive a similar measurement for the exports. However, some idea of the changes in the Company's operating costs caused by price changes can be gathered from the arithmetic average of the two separate price indices of exports and imports. The composite terms of trade (Table A.3, column 7)

Table A3. *Indices of total volume, price, and terms of trade*

Year	Import volume index (0	\Py\ Import price index (2)	Export volume index (3)	[Pxl Export price index (4)	[PS] Silver price index (5)	Terms of trade ½(Px+P1f) (6)	1(P ⊥P) P* t\ x~r y) IOQ Terms of Trade corrected by exchange fluctuations (7)	Index of barter terms of trade PxjPy (8)
1660			100	100				
1661			124	127				
1662			179	156				
1663			224	100				
1664	100	100	300	85	101.6	92.5	94.0	IOO
1665	122	94	182	92	101.6	93-o	94-5	''5
1666	5	91	132	92	101.6	9i-5	93-o	"9
1667	41	85	67	78	101.6	81.5	82.8	108
1668	1	231	316	"5	101.6	173.0	175-8	59
1669	113	89	221	178	101.8	133-0	135-4	235
1670	184	85	703	70	102.4	77-5	79-4	97
1671	192	76	792	87	101.6	81.5	82.8	135
1672	263	90	643	95	101.6	92.5	94.0	124
1673	229	82	224	104	102.8	93-o	95-6	149
1674	162	80	362	86	102.0	83.0	84.7	126
1675	135	9°	545	123	102.0	106.5	108.6	161
1676	296	82	730	112	100.8	97-o	97-8	161
1677	250	93	594	IOI	100.8	97-o	97-8	128
1678	257	92	553	IOI	101.6	96.5	98.0	129
1679	267	96	323	92	101.6	94-o	95-o	''3
1680	258	100	458	85	101.6	92.5	94.0	100
1681	298	96	459	103	102.4	99-5	102.0	126
1682	340	9°	675	"9	103.2	104.5	107.8	156
1683	388	98	385	"5	103.2	106.5	110.0	138
1684	619	94	306	"3	104.8	103.5	108.5	141
1685	412	103	505	103	103.2	103.0	106.3	118
1686	257	91	617	108	101.6	99-5	IOI.I	140
1687	253	97	216	87	103.2	92.0	95-o	106
1688	130	93	181	II9	102.0	106.0	108.1	151
1689	129	76	20	248	102.0	162.0	165.2	384
1690	139	63	38	157	102.0	110.0	112.2	293
1691	84	72	0	0	102.0	0.0	0.0	0
1692	24	80	177	130	in.3	105.0	117.0	191
1693	58	76	181	141	108.1	108.5	"7-3	218
1694	75	77	1394	104	108.1	90.5	98.0	159
1695	38	56	348	129	in.3	92.5	103.0	271
1696	144	78	878	107	133.8	92.5	123.8	161
1697	125	86	26	72	125.6	79-o	99-2	98
1698	224	84	303	97	100.0	90.5	90-5	136
1699	246	114	957	66	108.1	90.0	97-3	68
1700	342	106	673	85	106.4	95-5	101.6	94
1701	394	109	292	105	116.0	107.0	124.1	"3
1702	219	123	501	78	108.1	100.5	108.6	75
1703	161	113	0	0	108.1	0	0	0
1704	97	117	0	0	108.1	0	0	0
1705	95	155	0	0	106.4	0	0	0
1706	132	"5	251	62	108.8	88.5	96.2	63
1707	107	120	264	57	106.4	88.5	94-2	56
1708	93	129	543	73	105.6	101.0	106.7	67
1709	"9	121	952	70	107.2	95-5	102.4	68
1710	225	120	1076	74	108.1	97-o	104.8	73
1711	277	118	1516	69	106.4	93-5	99-5	69
1712	264	133	1433	61	106.4	97-o	103.2	54
1713	290	134	933	62	108.1	98.0	106.0	54
1714	279	128	629	70	108.1	99-o	107.0	64

Table A3 *(cont.)*

Year	Import volume index (1)	$\left[P_y\right]$ Import price index (2)	Export volume index (3)	$\left[P_x\right]$ Export price index (4)	$\left[P_s\right]$ Silver price index (5)	Terms of trade $\frac{1}{2}(P_x+P_y)$ (6)	$\frac{1}{2}(P_x+P_y)\frac{P_s}{100}$ Terms of Trade corrected by exchange fluctuations (7)	Index of barter terms of trade P_x/P_y (8)
1715	185	no	480	87	102.4	98.5	IOI.0	93
1716	239	102	399	77	104.8	89.5	93-7	89
1717	275	132	404	74	108.1	103.0	111.3	66
1718	273	123	574	88	107.2	105.5	113.1	84
1719	417	112	581	80	106.4	96.0	102.0	84
1720	387	109	981	75	109.7	92.0	100.3	81
1721	431	109	977	73	109.7	91.0	100.0	79
1722	313	118	1096	68	in.3	93-°	103-5	68
1723	432	125	979	76	111.3	100.5	111.8	72
1724	490	116	789	86	109.7	101.5	111.3	87
1725	321	102	578	93	106.5	97-5	103.8	107
1726	482	9i	613	79	109.7	85.0	93-2	102
1727	551	9i	582	78	109.7	84.5	92.7	IOI
1728	378	104	869	68	109.7	86.0	94-3	77
1729	453	107	835	69	109.7	88.0	9^-5	76
1730	394	112	1041	71	109.7	91.5	100.4	75
1731	491	107	1163	69	108.1	88.0	95.1	76
1732	506	96	1236	69	108.1	82.5	89.2	85
1733	453	9i	1214	67	108.1	79-0	85.4	87
1734	534	98	843	85	106.5	91.5	97-4	102
1735	550	99	973	77	103.2	92.0	94-9	92
1736	457	97	1431	73	103.2	85.0	87.7	89
1737	462	92	1381	77	103.2	84-5	87.2	98
1738	435	98	1646	78	104.8	88.0	92.2	94
1739	576	95	1274	75	104.8	85.0	89.1	93
1740	420	100	1000	79	106.5	89.5	95-3	93
1741	560	IOI	2125	74	109.7	87.5	96.0	86
1742	635	97	1298	74	109.7	85.5	93-8	90
1743	518	108	2381	70	109.7	89.0	97-6	76
1744	395	120	2001	70	109.7	95-0	104.0	69
1745	485	117	1837	70	108.1	93-5	IOI.I	70
1746	474	119	1707	71	108.1	95-°	102.7	70
1747	559	103	713	79	106.5	91.0	97-0	90
1748	433	in	1650	74	106.5	92.5	99-0	78
1749	411	116	1602	72	108.1	94.0	101.6	73
1750	579	126	2257	73	106.5	100.0	106.5	68
1751	474	132	2069	81	106.5	106.5	113.4	72
1752	558	112	3023	71	108.1	91.5	98.9	75
1753	548	in	3173	76	108.1	93-5	IOI.I	81
1754	571	99	3239	76	109.7	87.5	96.0	90
1755	588	in	2039	79	109.7	95-0	104.2	84
1756	567	105	1906	79	108.1	92.0	99-5	89
1757	459	104	2508	79	108.1	91.5	99-0	89
1758	406	"5	2307	77	108.1	96.0	103.7	79
1759	501	107	2564	83	111.3	95-0	105.7	91
1760	524	98	2602	84	111.3	91.0	101.3	IOI

Note. The two volume indices in col. 1 and 3 are constructed by taking all current annual quantities and multiplying them by a vector of prices in the base year, i.e. $V_i = \Sigma Q_{ij} P_{ij}$. The two price indices in col. 2 and 4 are constructed by taking the annual values and deflating them by the volume indices, i.e. $P(\text{index})_i = \frac{\text{Value}}{\text{Volume}} \cdot 100$.

The terms of trade in col. 8 is the barter rate, i.e. $\frac{P_x}{P_y}$ for 1664 = 100.

when corrected for exchange-rate fluctuations (the variation in silver price) is adequate in explaining how the joint movements in European and Asian prices affected the Company's financial fortunes.

So far as the imports are concerned, it can be easily verified from the volume index that the hypothesis of real or demand-induced movements in the total values is well justified. At the same time it is necessary to make a distinction between an upward and a downward movement. With the exception of a few years, the rate of changes in an upward direction kept ahead of price changes throughout the period. During the years from 1664 to 1698 the index of import prices in fact exhibits marked downward fluctuations, and there were only three occasions when it equalled or rose above the level of 1664. It may well be that the choice of the latter year as a base has influenced the shape of the index. Certainly we have no precise information whether it was a 'normal' year or not from the point of measuring the prices. The Court of Committees, as we shall see later, were complaining in the 1670s that the cost price of the Company's goods were rising in India. Yet the index was often ten to twenty points below the base year. But no matter how the base period is chosen, it would still remain true that in the second half of the seventeenth century there is no visible upward trend in the weighted average of the Company's import prices. The position begins to change from the turn of the century. In 1699 the index rises by fourteen points and thereafter for two decades there is a fairly rapid rise. The highest point in the index occurred in 1705 when it stood at 155 and for the next ten years it remained 20-30 per cent above the base. From 1725 the upward pressure on prices appears to have slackened and there was an actual decline below the baseline in the 1730s. It was not until 1743 that the index began to rise once more, though in 1760 it was down to 98.

From this review of the price movements it cannot yet be stated conclusively that the price of commodities in Asia during this period lacked definite trends, because the changes in the composition of trade and the differing weights of individual items in the total index may effectively mask the long-term movements. For an analysis of price changes it is best to take the various available series separately and see to what extent they vary systematically over time, a task that will be postponed till the final section. The behaviour of the import prices implies that the changes in the volume index follow closely the pattern of movements in total values. From 1670 the index rises rapidly, although in 1674 and 1675 ^ ^ quite steeply. But at the apex of this particular oscillation the volume index rose to 619 points, which is surpassed only once, in 1742. Apart from emphasising the exceptional nature of the boom, about which more will be said later, the figure for 1684 demonstrates that the managers of the Company were strongly

influenced in their decisions by the rapid expansionary forces operating in Europe's trade with Asia during the seventeenth century. From 1684 the index turns downward, and the years of really severe crisis lasted until 1697. From the following year there was a sharp improvement that was broken by the outbreak of war in 1702. It was not till the union of the two rival East India Companies in 1709 that the volume of trade once again showed signs of renewed strength. By 1719 it had reached a new high level, and for the remaining four decades until 1760 the index fluctuated a great deal from one year to another but never fell below 313 points, which was recorded in 1722. On an average it varied between 400 and 550 points.

When we turn from import to export indices, it is equally clear that movements in volume contributed far more to the value-series than price changes. However, there is a significant difference between the export of treasure and that of commodities. As treasure accounted for 70-90 per cent of the total exports and much of it went in the form of silver, the price index of the latter indicates effectively the degree of changes in the bullion and specie exports. From 1664 to 1691 the price of silver in London remained stable, and it was only marginally above the official mint rates. Whatever movements there were during these years in the total value of treasure exported to the Indies were the result of the fluctuations in quantities. In other words, the East India Company's purchasing-power increased in real terms in Asia. With the beginning of the great deterioration in English currency and a general shortage of bullion which became manifest from about 1692 the silver price index showed a tendency to rise and it reached a maximum in 1696. During the first half of the eighteenth century silver generally commanded a premium of 8-10 per cent above the mint price. In contrast to treasure, the price index for export goods displays a great deal more instability, particularly in the seventeenth century. The Committee for Exports reckoned that the price of broadcloth and other woollen cloth varied by as much as 15 per cent in individual years, and there was a tendency on their part in the earlier years to add a small loading to the actual prices paid to the wholesale dealers, so as to increase the invoice value of the shipments. The practice was abandoned later under protest from the Company's servants in the Indies, and this may account for the sharp fall in the price index which becomes evident from 1697. Whatever the reason, the weighted average of the export prices remains 20-30 per cent below the level of the base year during the first six decades of the eighteenth century. The volume index on the other hand underwent a steady expansion at least in terms of long-term secular movements. The quantities of goods exported in 1660, the base year, were very limited and this fact influences the index all through the period. For example, by 1664 it has climbed to 300

and in 1670 it reached 703 points. Although such a high level could not be maintained for more than a year or two, the volume index did not drastically decline until the severe crisis of the late 1680s. During the next century the quantities of exports were affected by the statutory obligation imposed on the Company to send out 10 per cent or more of its total export value in European commodities. Even so there seems to have been a real expansion from the 1730s and the total exports remained consistently at a high level, except for a short period between 1745 and 1749, when Anglo-French wars and other extraneous events depressed the sales in India.

We now come to the final two indices in Table A.3, the terms of trade and the average of the import and export prices deflated by the silver index. It is remarkable that between 1664 and 1696 the terms of trade were consistently favourable to the exports. From 1700, however, the index began to fall and for the rest of the period remained many points below the base year. These movements merely confirm and reflect the behaviour of the two separate price indices relating to the exports and imports. It is more interesting to see how the average of the two cost prices - defined as the composite terms of trade on p. 90 - behaved when the Company's total trade was rapidly expanding. The distinct upward movement in the index between 1670 and 1684 was mainly caused by changes in the price indices of export commodities and silver. But the annual variations are not large when compared with the volume figures. All the same an increase or decrease of 5-10 per cent in the cost price of the Company's trading products cannot be considered negligible. Such changes must have had important repercussions on the general profitability of the trade. In the last decade of the seventeenth century, the index predictably enough becomes quite unstable and there are sudden opposing movements. A relative calm returns from 1708, though the actual figures tend to remain at the higher end of the scale. It was not till 1726 that the composite index once again fell to the level of 1664. During the remaining 34 years of our period, its values fluctuated between 85 and 113 and there were only 11 years when the figure of 100 was exceeded. It seems that, in common with the other components of trade, the variable cost factors were also gradually approaching a stationary state after 1720.

The commodity composition of trade

In many ways, the long-term changes in the composition of the East India trade are the easiest to analyse. This is not to say that there were no random or short-period changes which resulted from the operation of the partial elasticity of supply or demand via the price mechanism. The century from 1660 to 1760 is remarkable for the stability of the

slow-moving characteristics of the Company's overall trade. In the case of the Dutch East India Company, our attention has been drawn to these features in the study made by Kristof Glamann. But for the English organisation no reliable comparable figures have hitherto been available. The relative share of the main commodities traded in the total value is listed for each year in our statistical tables, from which both the long and short movements can be gauged. Here it will perhaps be sufficient to summarise the main results. Glamann has made an important distinction between the composition of trade as seen from the investment point of view and that as indicated by the capacity of each individual commodity to yield revenue in the respective selling markets.[17] The first is symbolised by the cost value of cargo brought home, while the second can be measured by the amounts realised at the auction sales. In Tables C.8-C.24 (pp. 519-48) this distinction is taken care of in the mark-up figure for each import, which presents the ratio between invoice prices and the auction sale prices. By multiplying the cost proportions by the mark-up, we are able in each case to see how its share would have changed in the total sales revenue. The only limitation of the data is that after 1705 the sales figures are no longer available in the general account books, except under broad categories which include a number of different goods.

The first half of the seventeenth century can be described as the period of pepper and spices in European trade with the Indies. Although there were many structural differences in trading methods, commercial organisation, and financial techniques, from the point of view of commodities it was a continuation of the earlier centuries. But the new Asian goods which had begun to make their appearance in the second and third decade of the century rapidly gained momentum after the middle years. In 1648-50 pepper and spices jointly accounted for 68 per cent of the invoice value of the V.O.C.'s return cargo for the Netherlands. The share of textiles, both cotton and silk, was only 14 per cent. All this had changed by 1698-1700, and the proportion of textiles had risen to 55 per cent. A similar pattern is discernible for the English East India Company, but the shift from pepper to textiles probably occurred earlier. In 1670 the Court of Committees noted that the Dutch were becoming much more active in the calico trade than it had been in the past, and there was indeed a sudden increase in the quantities of Dutch textile imports from India in the 1670s.[18] The English exclusion from the Spice Islands and the Dutch determination to put many difficulties in the way of the Company's pepper trade obviously had some part to play in English concentration on developing a European market for Indian dye-stuffs, drugs, and textiles. The extent to which the transformation had already taken place when our period of study begins is confirmed by the actual figures. From 1664 to

1678 the share of pepper (see Table C.14, pp. 529-30) in total value varied between 15 to 30 per cent. The cotton and silk piece goods (Table C.24, pp. 547-8) on the other hand accounted for no less than 49 per cent and on an average their proportion remained at 60-70 per cent. The share of indigo fluctuated from 2 to 5 per cent, and the same margins applied to saltpetre. It is striking that later on in the eighteenth century the textiles as a group retained their ascendancy, and if anything their share tended to increase. But pepper by this time had fallen below 1 o per cent of the total value, and it was rarely above the level of 7 per cent.

The two great growth commodities of the eighteenth century were of course coffee and tea. In 1670s tea was imported into England through Bantam. It was not until 1690 that its share exceeded 1 per cent of the imports. Even in 1717, the year from which it was regularly imported, tea accounted for only 7 per cent of the Company's Asian goods. In the coming years its share sometimes rose as high as 18-19 per cent, but it could also be as low as 2 per cent. From 1747 tea became much more important, reaching 20 per cent of the total, and in 1760 it was no less than 40 per cent. The history of the Company's coffee imports was less spectacular, though coffee also displayed a greater stability. In the seventeenth century its share remained steady at 1-2 per cent. But from 1706 coffee began to rise above 5 per cent and in 1724 had reached the highest point at 22 per cent. There was a relative decline after 1730, its proportion varying from 3 to 9 per cent. Tedious as this description of the Company's import composition has been, it nevertheless proves that the foundation of the East India trade as carried on by the maritime nations of north western Europe largely rested on an exchange of Western precious metals for Asian manufactured goods, just as in the nineteenth century it was Europe's turn to supply Asia with low-cost, machine-produced industrial products in return for its raw materials. However, it is legitimate here to question whether the European export of precious metals during the earlier period was in the same category as the primary exports of the non-industrial countries of the nineteenth century. The answer must surely be a negative one, if only because the method and technique of extracting them from the mines had important technological and organisational implications for economic development.

The geographical distribution of trade

From what has already been said about the balance of import commodities, it is not difficult to guess the shifts in the geographical structure of the Company's trade. In the earlier period, the commercial organisation in Asia was supported on the two complementary

factories, Bantam and Surat. Not only was pepper supplied from areas under the trading spheres of both the factories, but Surat in addition provided the bulk of the Company's Indian textiles, indigo, and other drugs. By 1664 this joint domination of Surat and Bantam in the Company's import trade was already on the ebb and in this year their respective shares in the total value were only 36 and 10 per cent. The importance of the Coromandel coast is shown by its share of 35 per cent, while Bengal accounted for 18 per cent. It is, however, true that these figures did not remain static. In the 1670s, when the Company embarked on an intense competition with the Dutch Company in an effort to retain control over the pepper trade, the share of Bantam went up, often as high as 25 per cent. The capture of the port by the Dutch in 1682 at one stroke undermined the economic importance of the whole of South East Asia for the English, and even after the foundation of Bencoolen in western Sumatra the share of the area seldom exceeded 2 per cent of the total. The weight of the eastward shift in the Indian subcontinent was not quite so dramatic; but its direction was nonetheless unmistakably evident. Until 1700 Surat and Madras between them supplied 60-80 per cent of the total imports, and the balance was very evenly divided, with Madras perhaps having a slight edge over the other. From the beginning of the eighteenth century, however, the Company's trade with western India suffered a series of severe disruptions, though in normal years it was still just over 20 per cent. The decline sets in after 1715 and it was only in very exceptional and prosperous times that the share of Surat ever rose beyond 15 per cent. What is discernible from the regional distribution figures is a kind of alternating movement. For three or four years the proportion of western India would fluctuate at around 10 per cent, to be followed by a period when this declined to 5-8 per cent. The commercial eclipse of the Surat Factory in the East India Company's trading organisation was primarily the result of a shift away from the cheap and coarse textiles in which Gujarat and the Deccan specialised and later the disappearance of indigo from the import list. For the same reason - the revolution in textile fashion and use - the coast of Coromandel was able to maintain its share more successfully than western India; but from the mid-1720s the share of Madras gradually fell below 20 per cent, the average level being about 15 per cent. The relative decline of the other two areas inevitably placed Bengal as the most important supplier of the Company's goods. In 1700 the share of Bengal had already reached 47 per cent and after 1726 it was seldom less than 50-60 per cent. The last decade of our period, however, registers a decline for Bengal, mainly as a result of the rise in the share of trade with China. With the rapid change in the political power base of the Company's activities in India, its China trade was already becoming

the mainstay of the commercial viability of its operations in the Indies. This was a development that was to take on an increasingly significant role as the history of the Company drew to a close in the first three decades of the nineteenth century.

Some comments on the price movements in Europe and India i66o-iy6o

In the summer of 1753 Charles Manningham and William Frankland, the Company's warehousekeepers in Calcutta, made a review of the whole method of procuring goods in Bengal. During the course of their analysis, they observed, 'That the price of every kind of provisions and necessaries of Life is greatly enhanced in value to what it was 10 or 20 years since is a melancholy truth. Of course, the charge of Manufacturing as likewise the price of many Materials must and ever will bear a proportion to the Rate of Provisions. These are circumstances that have been considered in all our Contracts of late years and must have due weight the present season in whatever manner the Investment is provided.'[19] In dealing with the phenomenon of price rises, this is as far as the contemporaneous business analysis went. It is perhaps significant that the two officials should have attributed the price increases which took place in Bengal from the early 1740s to a condition of real scarcity. The frequent 'irruption' of the Marathas and consequent wars were held to be the main instrument of bringing ruin and depopulation to the province, which the harsh financial policy of the nawab's government did nothing to alleviate.[20]

The passage quoted above typically reveals the concern of practical men with the immediate consequence of a change in the relative values of economic products. The reasoning behind the actual explanations of these alterations was invariably cast in terms of real entities, of commodity and labour inputs.[21] In the vast mass of correspondence, diaries, and other papers of the Company's servants in India one never comes across an explanation of price changes based on the quantity theory of money. All that is found is the eternal triangle: the price of textiles rises because the cost of cotton yarn and foodgrains has risen, the latter being in short supply because either there is a bad harvest or some political catastrophe. Yet, the theorists have been busy in Europe since the middle of the sixteenth century in drawing a link between the volume of currency in circulation and the *level* of prices. Adam Smith, and Richard Cantillon fifty years before him, had especially emphasised the relationship which the contemporaries saw between the discovery of the American silver mines and the fall in the real value of precious metals.[22] There were writers who even went so far as to predict that the continued export of silver to the Indies would eventually raise the price of Asian commodities.[23] The reason why the members of the East

India Directorate, some of whom were expert authorities on monetary and financial matters, failed to see even a theoretical connection between the massive export of treasure from Europe and the price level in Asia is something of a minor mystery.

Is it possible to believe that their silence sprang from a conviction or indifference grounded on the fact that in real life it was extremely difficult to perceive the Trice Revolution' and to relate it to a possible increase in money supply?[24] But with the weight of quantitative evidence before us, we at least are bound to ask ourselves if there was in fact a long-term rise in prices during the century of our study. From his analysis of English wheat prices in the years from 1570 to 1640, Adam Smith concluded - with a measure of confidence not available to modern historians - that 'about 1636 the effect of the discovery of the mines of America in reducing the value of silver appears to have been completed, and the value of that metal seems never to have sunk lower in proportion to that of corn than it was about that time'.[25] We do not propose to enter into the current controversy concerning the nature of the Trice Revolution' in Europe during the sixteenth and early seventeenth centuries. It is quite evident from the three-year moving-average of broadcloth prices that from 1660 to 1760 the series remained virtually stationary. When a linear trend line is fitted to the data by the least-squares method, it shows an annual decline of £0.03.[26] The most noticeable feature of the English cloth prices is the sharp rise which took place in the 1690s. The price of many other commodities also rose in England during this period, and the East India Company was inclined to attribute the rise to the increase in the price of silver. The second series of our export prices, the moving-average for lead, presents greater irregularities than the case of woollen cloth. The statistical analysis of the series fails completely to detect any evidence of a secular trend. The price movements of the East India Company's exports seem to suggest that the contemporaneous belief in the dwindling effect of American silver from the middle of the seventeenth century was well justified.

There still remains the question of Indian prices. The attempt to extend the analogy of the influx of American silver and the European Trice Revolution' to the Mughal Empire inevitably tends to founder because of a lack of adequate quantitative information. For the purpose of throwing some light on this difficult problem, we have selected five individual price series. The commodities concerned are raw silk, saltpetre, and cotton textiles purchased by the Company in Gujarat, Coromandel, and Bengal. The weighted moving-average of these series is supplemented by a graph of rice prices in Bengal (Figure 8) during the eighteenth century.[27] There is no doubt that the prices of all five import goods (Figures 11-20) exhibit similar movements. The

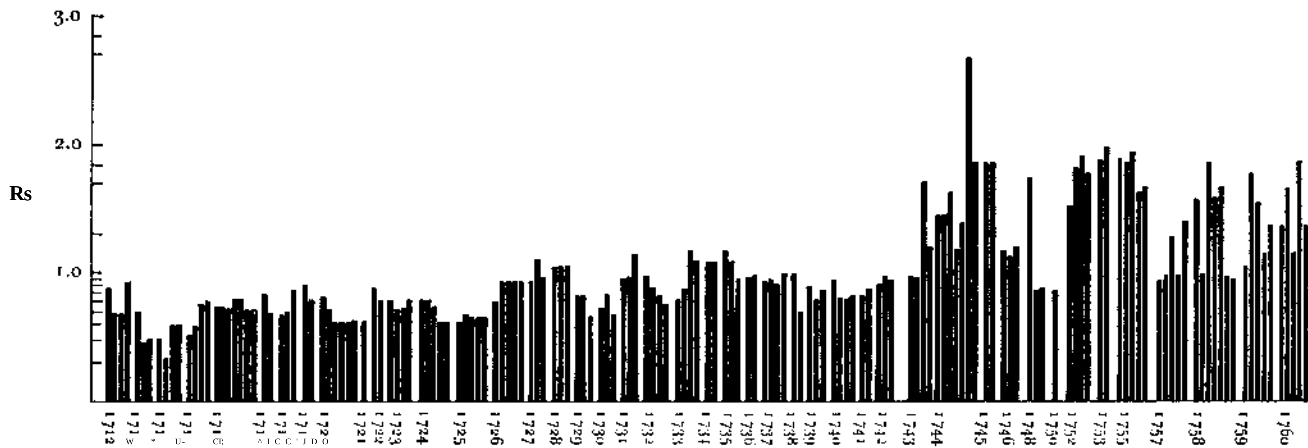


Figure 8. Price of ordinary rice in Bengal, per maund 1712-60. Monthly purchases December to April.

actual amplitude and phase of the fluctuations might vary from one series to another, but the general synchronic trends are clearly visible, as also is a gradual rise over the period as a whole. The evidence of a fairly sustained and marked increase is particularly strong for raw silk and Bengal textiles during the years from 1720 to 1760. This was precisely the period when the foreign trade of the province underwent a phenomenal increase and bullion imported by the European Companies poured into the Imperial mints. That there was an expansion in the economic activity of Bengal and an increase in the money supply is certain. Beyond this it is not possible to determine conclusively whether the rise in the price of these particular export-oriented commodities was caused by competition among buyers or whether some deepseated monetary changes were at work. From the graph of the rice prices (Figure 8) we can see that an upward trend was operating during the century, though in individual years of scarcity or famines there were large fluctuations. In the histogram the price of rice suddenly rises from 1743 and continues to increase till the next decade. The rise of 1752-3 was particularly marked. This was the increase observed and commented upon by Manningham and Frankland in 1753 and ascribed by them to the deteriorating economic effects of the Maratha invasions. Do we need to look for any other explanation? It is clear that a purely monetary interpretation of the price rise in Bengal or in India

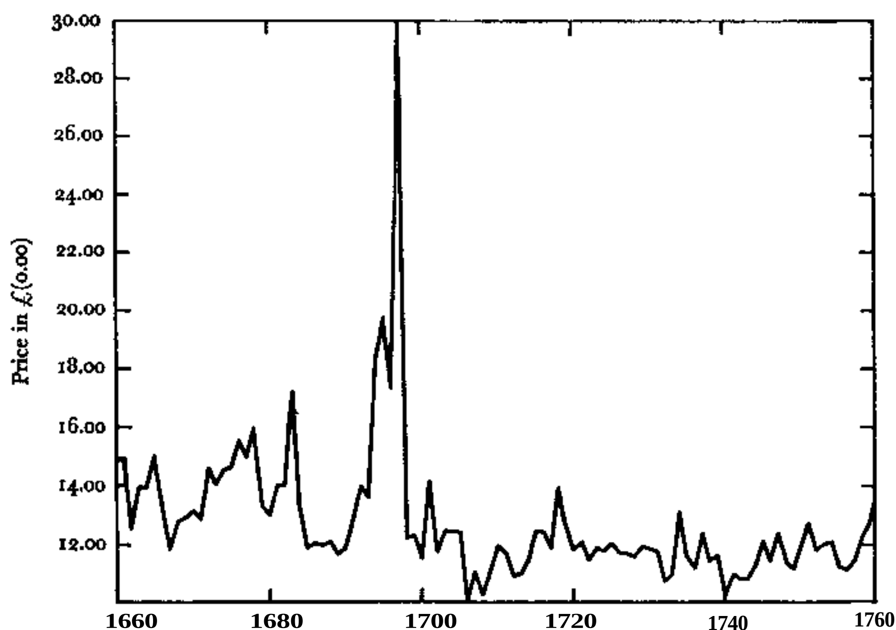


Figure 9. Broadcloth price.

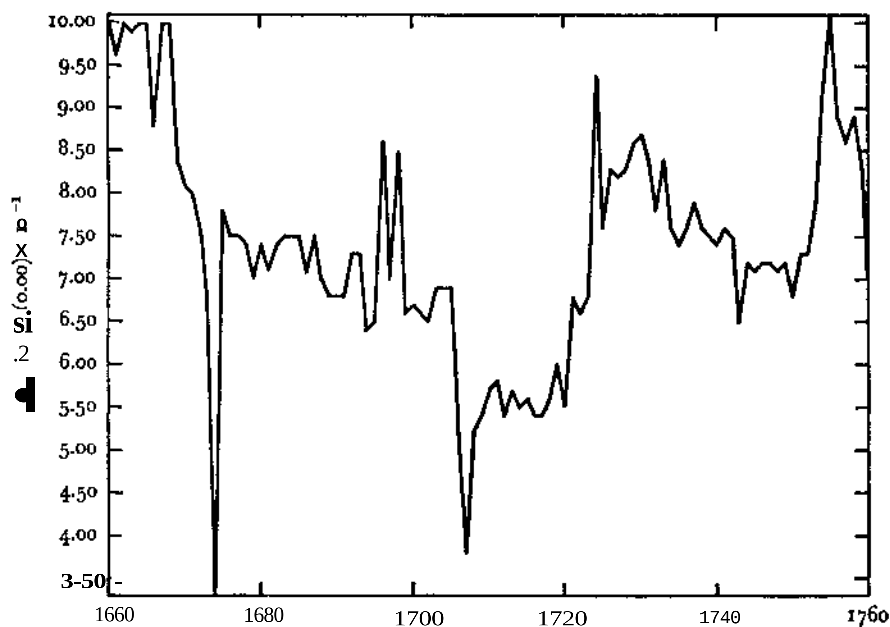


Figure 10. Lead price.

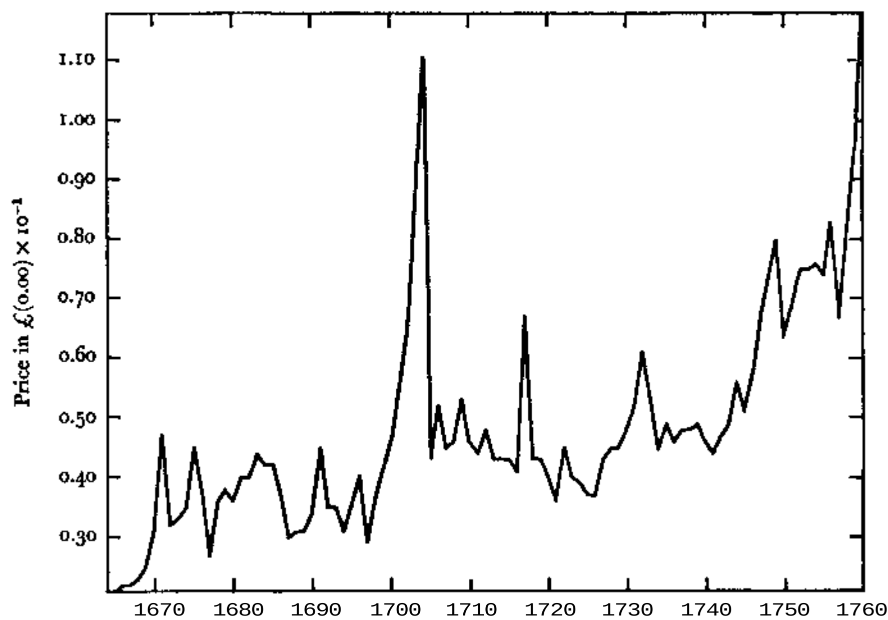


Figure 11. Raw silk price.

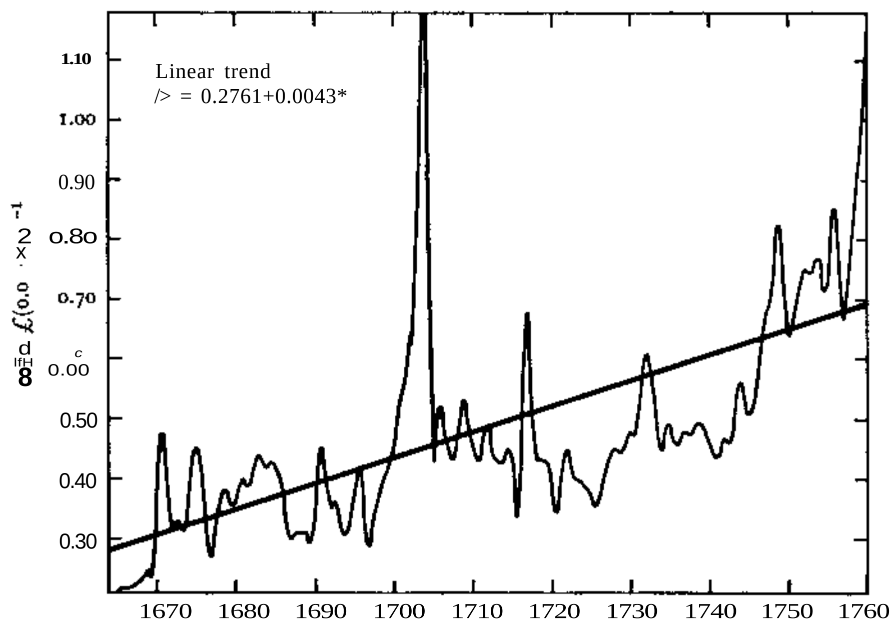


Figure 12. Raw silk price: polynomial and linear trend.

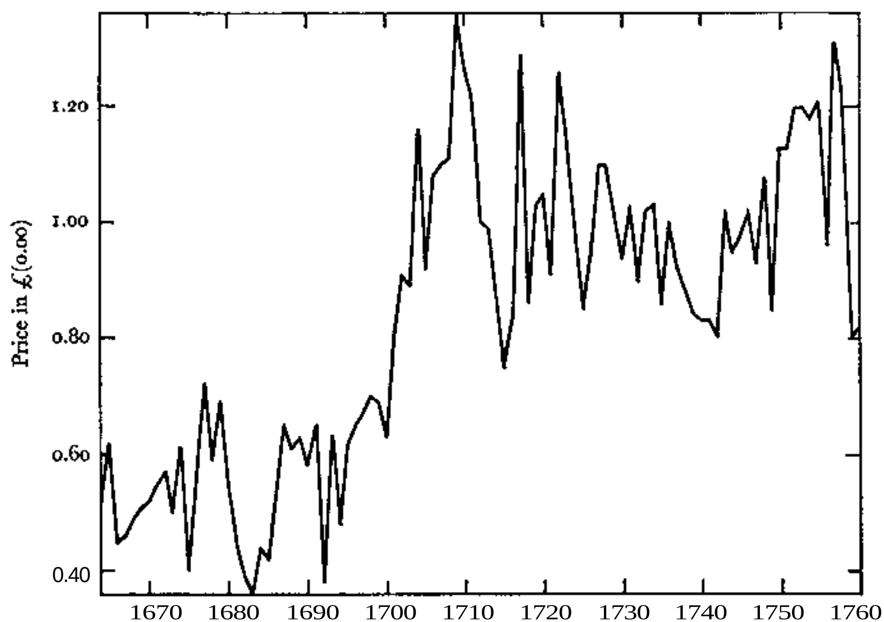


Figure 13. Saltpetre price.

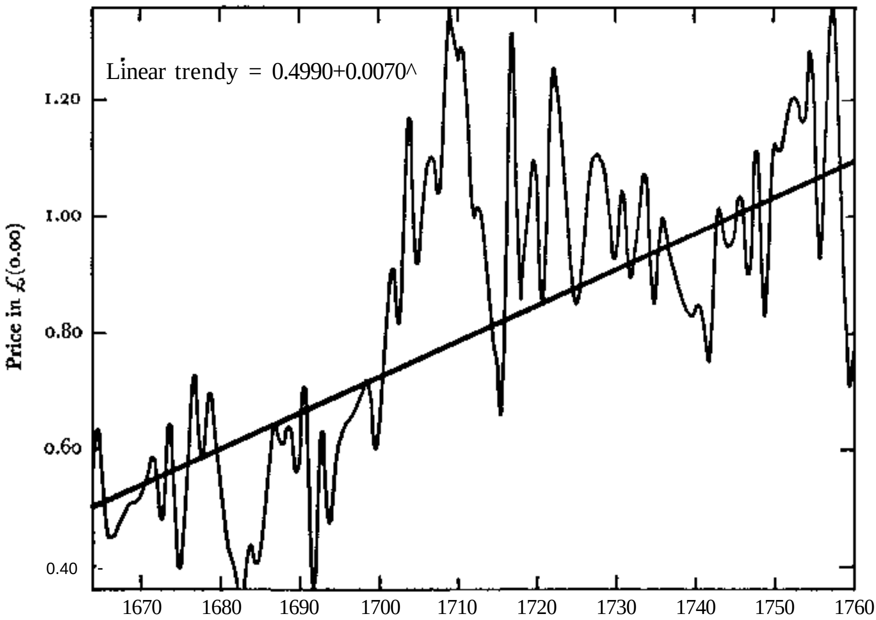


Figure 14. Saltpetre price: polynomial and linear trend.

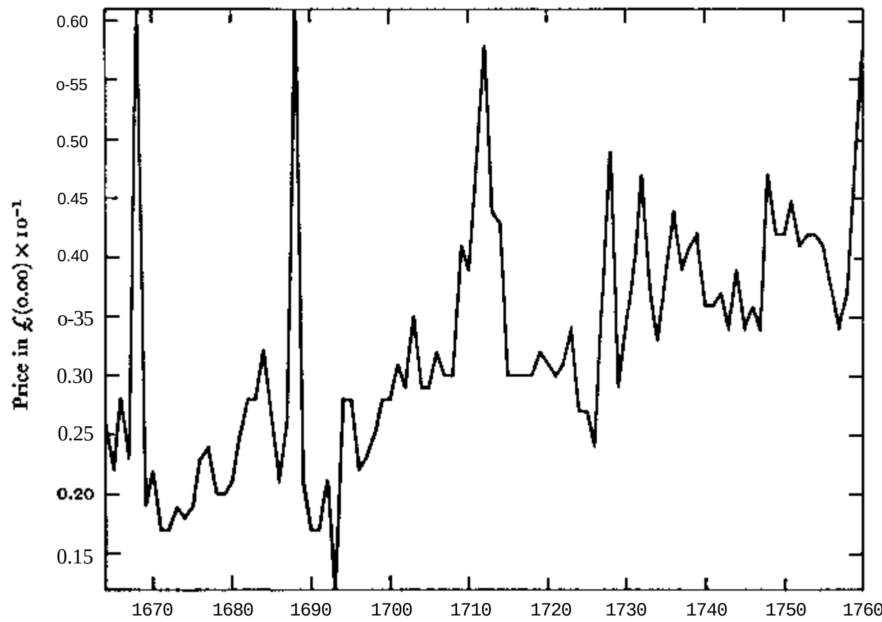


Figure 15. Bombay textile price.

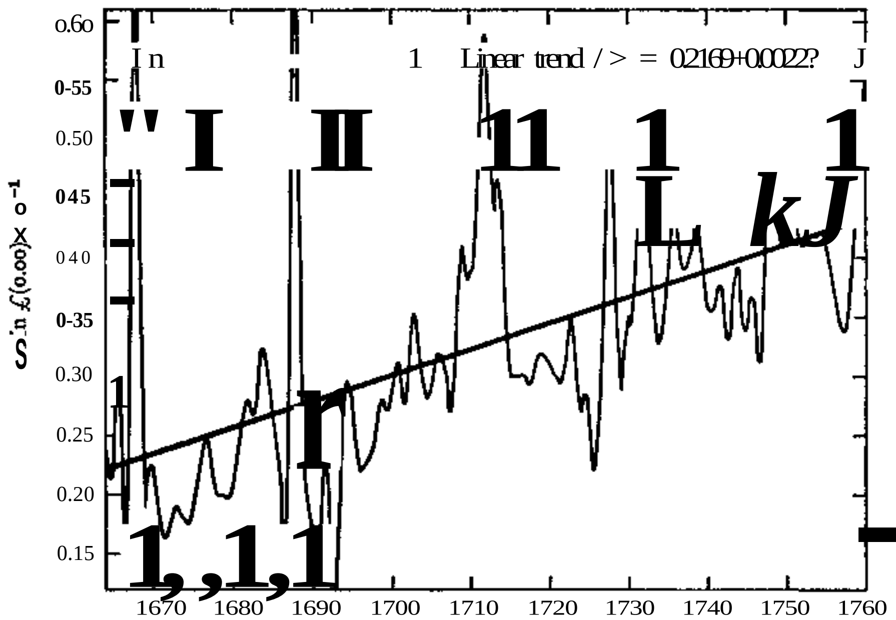


Figure 16. Bombay textile price: polynomial and linear trend.



Figure 17. Madras textile price.

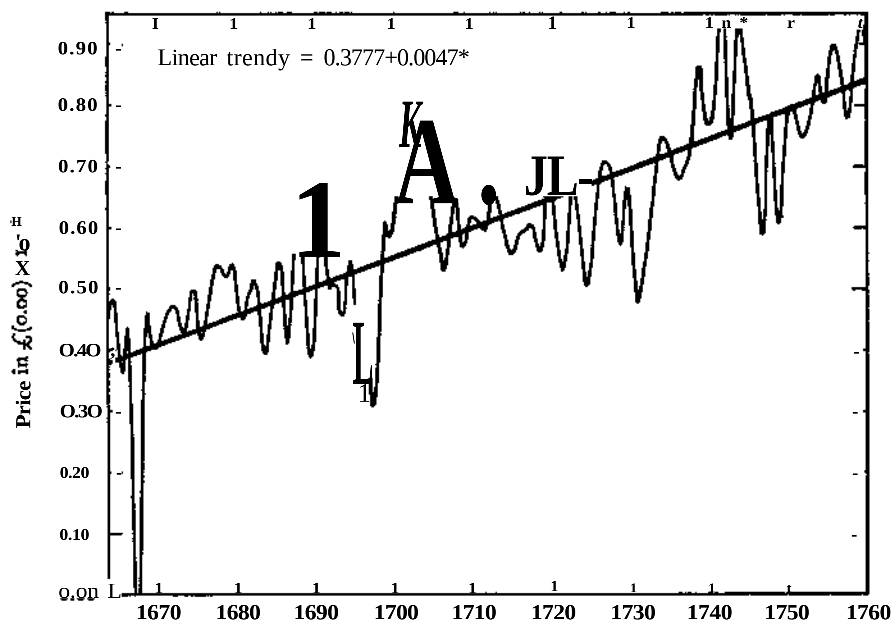


Figure 18. Madras textile price: polynomial and linear trend.

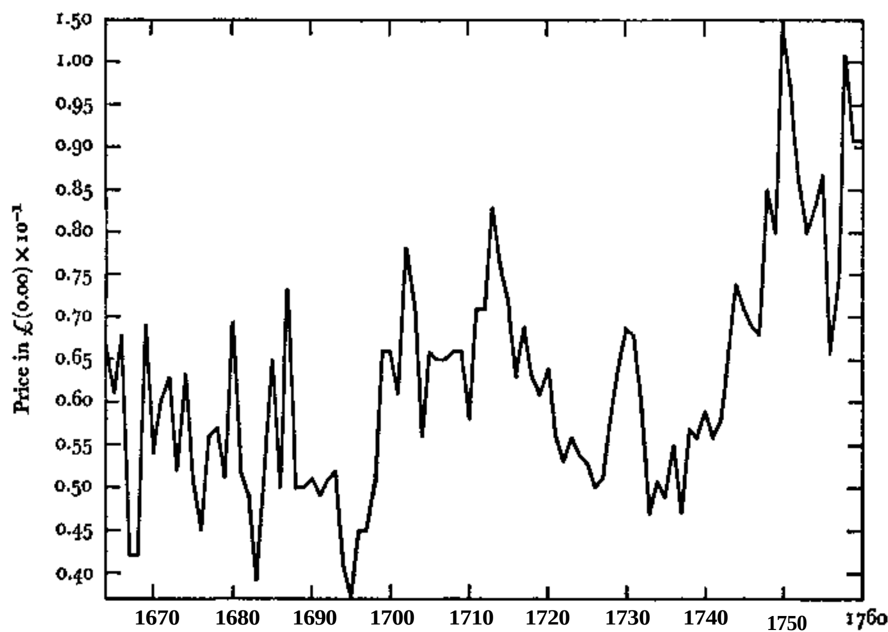


Figure 19. Bengal textile price.

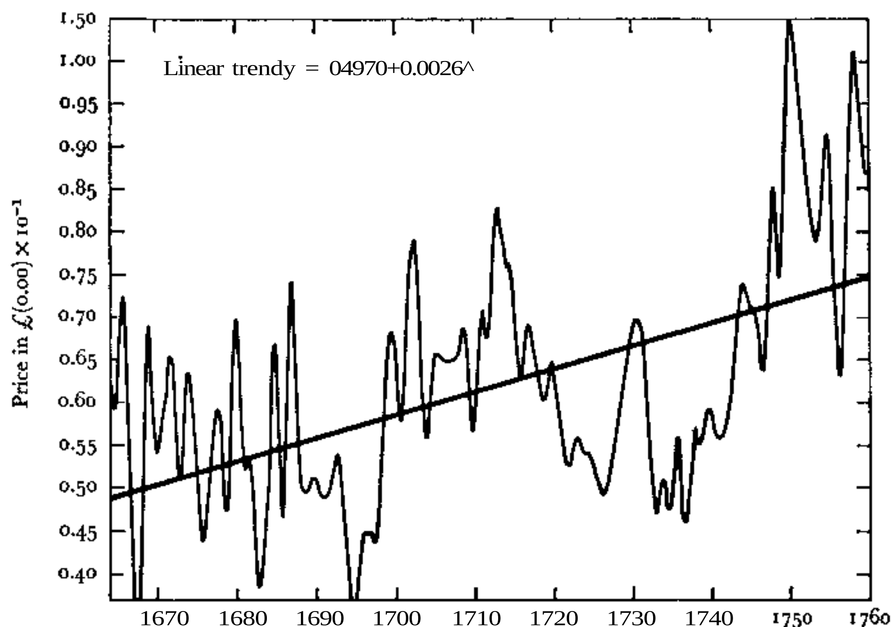


Figure 20. Bengal textile price: polynomial and linear trend.

as a whole must point to the exact mechanism through which the increase in money supply affected prices. The theoretical issues raised by this problem will be discussed later (in Chapter 8). One possible explanation, to be noted in brief, is that the foreign demand for export goods, which were all paid for in cash, stimulated domestic demand for food grains and other consumer products. This in its turn could have exerted some pressure on prices.

6
POLITICS OF TRADE

The political objectives and ideology

In 1721 when a squadron of the Royal Navy was sent to the Indian Ocean to suppress some European pirates who had been molesting local shipping, its commander, Commodore Mathews, demanded that the Company's ships should strike their pennants to him and that he should receive the first salutes from the land settlements. The Bombay Council protested to the authorities at home that these instructions, if they were official, lessened the status of the Company's servants in the eyes of the Indian political rulers. For the President of Bombay had always appeared in India as a public minister and the king's governor.[1] The statement highlights an important aspect of the Company's trading methods in Asia. The claim made by Bombay could not of course be sustained in a strictly legal sense, but it bears witness to a de-facto position in which the distinction between delegated political power and direct representation of national sovereignty was not always observed in practice. This is not to say that questions of legitimacy and diplomatic protocol were unimportant in Asian political order. From the point of view of Mughal officers who had to deal with the English and Dutch East India Companies, it made little difference whether the political power possessed by the Companies was direct or indirect. What mattered to them was the indisputable fact that the European traders were totally different from any other Asian commercial groups with whom they came into contact. For one thing the corporate structure of the Companies gave them a collective strength and unity of purpose not available to the individual groups of merchants trading with or resident in the Mughal Empire. Through their command over sea power, the chartered Companies were also in a position to inflict material damage to the seaborne trade of the Empire. A tacit recognition of the political reality was implicit in the treatment given by Asian rulers to the local Chiefs of the East India Company's main trading establishments. In the European travel accounts of Surat, for example, the heads of the English and Dutch factories appear as the co-equals of the Mughal ruling elite in life style and they were treated as such on the point of diplomatic status.[2]

The role played by armed force in European trade with Asia was often discussed and debated upon in very explicit terms by the managers of the two trading Companies, and in the early years of the seventeenth century the tradition established by the Portuguese, the policy of the *Estado da India* towards Muslim trade and shipping, provided a natural point of controversy. Writing home to the Company in 1616, Sir Thomas Roe expressed his view that trade and war were incompatible. The policy of armed trading, according to him, was responsible for impoverishing the Portuguese, in spite of their seemingly rich residences and settlements in Asia. The Portuguese did not profit out of the Indies, as they decided to defend their possessions by force, and the same mistake was made by the Dutch who also sought plantations in the east by the sword. On his own admission, Roe had changed his mind since he had petitioned Prince Khurram a few months earlier for the grant of a fortified port in return for naval assistance against the Portuguese. The Prince had replied scornfully that neither he nor his father, Jahangir, required any help from the English and that if they came as merchants they would be welcomed in the Imperial dominions. As war was a risky business, Roe's advice to the Company was to seek profits by quiet trading at sea.[3] As a statement of general principle this was perhaps not very different from the standpoint later adopted by the Dutch Company also in relation to its commercial policy in mainland Asia. In 1636 when Dutch trade with Surat was going through a bad phase, the Directors of the V.O.C. asked their Governor General in the Indies to consider whether it was not an opportune moment to use force against the port in order to square accounts for past grievances. But at the same time they thought it prudent to remind the Batavia Council that though it may be necessary at times to use rough methods for securing reasonable terms, so long as it could be foreborn it would be better to trade in quiet than to restore peace by force of arms.[4]

These qualifications did not prevent regular reprisals being made against indigenous Asian shipping when political relations with port authorities reached breaking points. One of the most interesting discussions on the use of naval force and its effect on the commercial policy of the Mughal Emperors comes from the pen of an Italian nobleman, Pietro della Valle, who visited India during 1623-4. While he was in Goa, he heard that the English East India Company had captured a number of Muslim ships as a reprisal against the exactions of the imperial officers in Surat. Della Valle did not think that this was a wise expedient to follow. Apart from the manifest danger of disputing the power of a great ruler in his own territory, the English were mistaken in thinking that the disruption of commerce gave them any substantial bargaining power, for the Mughal emperor was a very wealthy prince

whose revenues arose from his own lands and not from the sea. Whatever profits the customs on the seaborne trade yielded went to the governor of Surat and other imperial officials rather than directly to the king's exchequer. Besides, if the English had genuine grievances, they should have appealed to the imperial court first for redress before taking the law into their own hands.[5]

Later after the abortive attempt to wage war (1688-9) on the Mughal Empire, Sir John Child, the governor of Bombay, assured the Company at home in 1689 that one of the reasons for the disappointing political outcome of the conflict was that the Mughal emperor was a very potent prince who did not at all value trade, and his subjects on the western coast of India were not so desperately poor or dependent on trade as the Company thought.[6] A high-ranking Mughal official who visited Bombay in 1696 has left a unique Indian view of the English East India Company's activities in these years. The author of the report strongly criticised the English for plundering Muslim ships visiting Mecca and the Red Sea, and went so far as to contrast their policy with that of the Portuguese who did not, according to him, attack ships at sea except those which had failed to take out Portuguese passes granting safe-conduct.[7] The view that the English East India Company deliberately enriched itself by an indiscriminate plunder of indigenous shipping is hardly the image which the Company itself projects in its own records. If there was any truth in the Mughal official's account, it applied for a brief period when Sir Josia Child was the Governor of the Company. But the point that went unnoticed in the Persian historical tract was a most significant one in international relations: the use of force whether directly expressed or not was an implicit part of European trade with Asia. To be sure in Khafi Khan's account, English occupation of Bombay was viewed with some resentment and the efforts of the Portuguese to convert Muslim or Hindu children to the Christian faith severely condemned.[8] Imperial officers were constantly on their guard against any possible growth of military power on the part of European nations in those trading cities where they were likely to come into strong competition with Indian merchants.[9] Places where the Europeans were allowed to establish fortified settlements were either outside the political control of the Mughals or devoid of any commercial importance. Sir Thomas Roe had perceived this very clearly when he pointed out to the Company in 1616 that if a suitable natural harbour was found in an unoccupied territory, it would be discovered at the same time that the surrounding country was barren and untraded. It was no easy task, he commented with a prophetic insight, to attract trade and merchants to such a place from existing and flourishing commercial centres.[10] But however aware the Mughals might be of European political designs, they did not ask

the reason why the Europeans thought it necessary in the first place to combine their trade in the Indies with claims of semi-sovereign rights.

An abstract discussion of such fundamental problems was of course rare and even alien to Indian political writings of the period. But on the part of Europeans, both the policy-makers in charge of the East India trade and those writers and thinkers who were already concerned with the questions of authority and power in the state and Church, there was a very real awareness that trade and expansion in Asia touched on the vital concepts of the laws of nations and international relationship. In the early seventeenth century the English and Dutch challenge to the age-long Portuguese domination of the Eastern seas provided the first opportunity for a formal discussion. The Dutch Company's claims were defended and justified on juridical grounds by Hugo Grotius in his *Mare liberum* (1608), which provoked the counter-reply of Seraphim de Freitas, contained in his *Dejusto imperio lusitanorum asiatico* published in 1625. Grotius had argued that the East Indies was not *terra nullius* which any European power could claim to occupy by virtue of papal authority or other unilateral declarations disregarding the existing sovereign rights of Asian rulers and princes. In his reply Freitas conceded this particular point, but he stated also that the traditional enmity between Christians and Muslims gave the Portuguese a just motive for waging war on the Turks and Arabs.[11]

The last point was one which was also stressed in the Mughal account of the Portuguese policy in India. In granting passes to local shipping, the author stated, the Portuguese made an exception of the ships of Arabia and Maskat, with which two countries they had long-standing enmity, and they attacked each other whenever opportunity offered.[12] That the use of force against Arab traders was an integral part of Portuguese policy in Asia right from the beginning is historically well documented.[13] Out of the original claim, made as early as 1500, to make war on the enemies of the holy faith, was to follow directly the Portuguese licensing system, the cartazes, which promised safety to Asian shipowners in return for a financial payment. The institution was eagerly adopted by the Dutch and English East India Companies, which inherited in full measure the anti-Islamic feeling against Asian political authority. The historical background to this attitude was outlined very clearly in a legal opinion delivered to the English Company in 1728 on the question of admitting the evidence of non-Christians in British law courts. According to this document, 'as the Laws of England were expounded in former ages both Turkes and other Infidels were not only excluded from being witnesses against Christians but were deemed also to be perpetual enemys and capable of no property at all and not entitled even to the Protection of the Laws'. With the passage of time 'this savage Temper of the Laws' became more humane and

the great extent of British commerce overseas made it necessary to admit the testimony of witnesses who had been disqualified in the past.[14]

In spite of a long tradition of anti-Islamic sentiments in law and diplomacy which characterised English public life, the East India Company did not systematically adopt an ideological viewpoint which sought to provide any kind of moral justification for armed trading. But there was always an underlying assumption that if it did not do so, the Company and its servants would expose their commercial capital and even personal safety to the exaction and violence of arbitrary rulers. In the political world of contemporaneous Asia, as perceived by the Court of Directors, European traders appeared as victims rather than as aggressors. There are innumerable examples illustrating this deeply held belief. In 1675 the Company's factors in Rajapur reported that all favours from local rulers must be bought and the people in those parts of the coast being Hindus were even more grasping than Muslims.[15] A later governor of Bombay thought that without a naval force the Company's Malabar settlements would be quickly overrun by the coastal kings. As he put it rhetorically, 'if no Naval Force no Trade, if no Fear no Friendship', the Company must judge whether the trade of the whole coast, Persia and Mokha was worth the expense of keeping a naval patrol.[16] To set the balance right, it must be said that the members of the Court of Directors did not always believe everything they were told about the nature of Asian people. A despatch to Sumatra written in the early eighteenth century categorically stated that the reputation for violent treachery universally ascribed to the Malay people was more than likely to have resulted from the ill-usage they met with from European hands. 'It is a sad truth,' the letter went on, 'that in all parts of India where the Europeans generally come the natives soon learn to flatter, cheat, and wreck their malice whereas in the inland countries where few Europeans ever are, they are generally harmless and innocent and not inclined to mischief. The difference must be from the ill examples of those who call themselves Christians.'[17]

There was reason for the Court's scepticism. By the early eighteenth century the East India Company's settlements in Asia had become semi-sovereign enclaves, able to exercise a certain measure of political power. The problem before the policy-makers was not so much to determine the situations in which force might be used against Asian powers to protect the Company's commercial interests as to restrain their own servants from overstepping the limits where acts of war ceased to be economically profitable to the organisation at home and served only the latter's private interests.[18] In this pragmatic approach lies the key to the question that was raised earlier: why did the use of force accompany European trade in the Indies? The ultimate answer

must be that the profits from armed trading were higher than in the case of peaceful commerce. Even the Portuguese political ideology had a substantial economic base, and in setting itself up as a sovereign power able to offer and sell protection to Asian traders the Portuguese Grown was merely following the precedent set by the Middle Eastern rulers through whose territories the spice trade of Europe had passed. International or interregional trade can hardly ever be considered as being free from political control. The profit derived from such interferences is not only an important contributor to state income but it is also part of an economic transaction in which traders are willing to pay a price for a definite service, the protection from violence and disruption of their activities, no matter how reprehensible such a service may be from a moral point of view. By applying a reasoning similar to the concept of economic rent it is possible to demonstrate that the 'price' of protection would be fixed at that level where the investor's marginal return on capital equalled his marginal cost. Beyond this point trade of a particular country or area would cease to be profitable and would be diverted to other channels where the cost of protection was lower.[19]

The political institution concerned with the selling of protection to traders may be conveniently described under the term 'redistributive enterprise' because it diverted income away from a primary agency. This definition is of course a variant of the concept of *redistributive* trade or economic exchanges developed by Karl Polanyi and his disciples.[20] For Polanyi, redistribution constituted the appropriation of the economic surplus produced by the division of labour by a central authority which in its turn redistributed it according to its needs or social custom. The main idea behind this line of theoretical reasoning is the notion of a central place or central authority through which multilateral transactions are conducted as opposed to purely reciprocal exchanges. In our definition, the actual task of distributing the goods is separated from the function of the central authority which 'commutes' it into a money claim. It can be readily seen that the dividing line between organised brigandage claiming tributes from passing merchants and the redistributive enterprise of legitimate and respectable political authorities is very thin indeed. Indian rulers had for centuries attempted to control and tax the transit trade of their kingdoms and the involvement of the Mughal ruling class in the redistributive enterprise was notorious beyond words. Even a prince of royal blood, Sultan Azim-ush-shan, was rebuked by Aurangzeb for turning the royal trade into a royal corruption during the period of his viceroyalty of Bengal.[21] The Portuguese were quick to perceive that their naval superiority over land-based Asian empires gave them a means of sharing in the profits of the existing redistributive enterprises. A series of fortified settlements, free from local political control, and a rigorous naval watch over the

most frequented sea-lanes provided the *Estado da India* with the two necessary conditions for realising its economic aims. It has been estimated that at the end of the sixteenth century the bulk of the *Estado da India's* income came not from the trade with Europe but from the sale of cartazes and the customs revenue at Ormuz, Goa, Diu, Cochin, and Malacca.[22]

The model set up by the Portuguese admirably suited the purpose of the Dutch and English East India Companies. The only significant difference was that these two organisations were determined to be traders first and territorial rulers next. Force was to play only a very carefully calculated role in their overall strategy. It was the means to an end, and the end was the maximisation of commercial profits. If trading costs could be reduced by becoming a part of the existing structure of redistributive enterprises in Asia, the policy of dominions was held to be justified. But it became unacceptable when the cost of maintaining the redistributive enterprise exceeded the predetermined benefits assigned to it. The political objectives of the V.O.C. and the East India Company shared a common structural form. The possession of an independent territorial base capable of yielding some local revenue was one aspect. Customs concessions or preferential treatment by Asian sovereigns was another. All local shipping was required to purchase safe-conduct passes, and these demands were backed up by the threat of naval blockade of the ports.

Although there was a close similarity between the methods followed by the Dutch and the English in realising the political aims in Asia, there were also important dissimilarities in their history and areas of operations. The V.O.C. laid the foundation of its imperial system within three decades of the Company's inception. For the English organisation a comparative development did not take place until the second half of the seventeenth century. Again, the possession of Batavia (1619) and a strong territorial base in Java and the Spice Islands enabled the Dutch to avoid the necessity of seeking similar bases in the Mughal Empire. The East India Company on the other hand felt vulnerable without fortified settlements in the Indian subcontinent, partly because it wished to avoid payments to the local redistributive enterprises and partly because the Directors wanted the Company to become a redistributive enterprise in its own rights. The most explicit formulation of such ideas and the strength of Dutch influence on the latter was to be found during the period of Sir Josia Child's governorship, which in many ways represented a break from the previous tradition of peaceful trading. The Company's aversion to the policy of provoking conflicts in India was stressed with special emphasis when the third Anglo-Dutch War broke out in 1672. There was a distinct danger that the extension of hostilities to the Indian subcontinent might

easily lead to military intervention by the south Indian rulers on behalf of one European nation or other. If the English remained on friendly terms with the coastal powers, it was highly probable that the Dutch would be deterred from attacking Madras for fear of a diplomatic breach with them. So far as the Indian rulers were concerned, Fort St George was asked not to forget that 'we are not only in their country upon termes by which we possesse what we there have, but also under their protection'.[23]

This was an important statement, indicative of the mood of the anti-war party within the Court of Committees. But as the Company's political relations with the Mughal rulers deteriorated in the 1670s, there was an increasing call for a more warlike policy, and with the accession to power of Josia Child's party in the 1680s the non-belligerent attitude was to be sharply reversed. As late as 1679, when Child was a member of the Court of Committees, the Company was deploring the Dutch method of trading from a position of armed strength. When the Madras Council wrote home that the fortifications of the town and the fort were being strengthened, the Court replied that the Dutch example in Asia should not be taken as a sound rule fit for copying. In its view, the cost of Dutch settlements had done the East India stock more harm than good from the shareholders' standpoint, and the Court were not willing to incur such charges on its own trade. If Madras could defend itself against any sudden attack, that was as much as the Company hoped for. In any case it was absolutely essential to maintain a good understanding with the king of Golconda and his ministers. For if Golconda really wished to go to war against the Company, there was nothing that Madras could do, the number of its guns or any other show of force notwithstanding, to 'reintegrate us in our trade'. The Court concluded that £500 spent on *pishkash* [presents] would serve a better purpose than the running expense of great fortifications.[24]

Within five years the political ideology of the Company underwent a complete change and soon a concerted attempt was to be made to create a privileged position for itself in the Mughal Empire by the force of arms. The acquisition of Madras and Bombay provided a tempting opportunity for making the Company relatively independent of the Indian powers. The rapidly increasing volume of the Company's trade in the 1670s had greatly raised its stakes in the East India affairs, which were being threatened by the interlopers at home and by the Dutch in Asia. It was becoming apparent that some vigorous counter-measures would have to be adopted to meet the growing challenge.[25] Also, for the first time in its history the direction of the Company was in the hands of a man who was a political thinker and had a fixed plan of action. The changing emphasis was visible with the first election of Josia Child to the governorship in 1681. For the rest of the decade he and his

faction remained in the uncontested control of the Company's decisions on trade and war. Child's ardent advocacy of a policy of dominions in Asia was founded on his belief that the commercial success of the Dutch Company was due to its political strategy.[26] His own war policy was aimed at winning a formal recognition from the Mughal Empire of the Company's right to trade as a sovereign power. That right was to be upheld by the establishment of a fortified settlement in Bengal, a province that was increasingly assuming a crucial place in the Company's trade. By becoming a local territorial power the Company would be in a position to raise revenues which in its turn would make the English a nation in India. The wise Dutch knew this axiomatic truth and for every paragraph their Directors addressed to commerce in the general letters ten were devoted to matters of government, civil and military affairs, warfare, and the increase of revenue. To trade in India as mere merchants by courtesy of the local rulers was to make a Very silly figure' unbecoming a national organisation, and the Court predicted confidently that the new policy would enable the Company to survive beyond the lives of men's youngest grandchildren.[27] These views were expressed at a time when the Court of Committees still believed that the war was going the Company's way and that the Mughal officers would soon ask for peace terms. By 1690 it was clear that the gamble had failed. The Company was expelled from Bengal, and Bombay Island was occupied by the forces of the Sidi, the Mughal admiral.[28]

A discouraged Court wrote to Madras in the summer of 1690 hoping that the Mughal emperor was as weary of the war as they were. For though he was a very great and rich prince who attached little weight to trade, yet they had reason to believe that 'he draws more annuall profitt from Trade especially from his Manufacturers within the Land than all the princes upon the face of the earth and it is no great pleasure to a great prince to see such multitudes of subjects starve for want of employment'.[29] A year later in the final knowledge of the peace terms, which were fairly hard to the Company, the members of the Court of Committees admitted that the attempt to wage war on 'that Great Monarch the MogulP was a very dangerous thing to do. But they thought that it was a just war which had prevented the Company's affairs being totally ruined by the English interlopers and the extorting Moor governors.[30] The old attitude which saw the Company as a victim of political oppression rather than an imperial force in search of territorial possessions was back again, and the desire for local revenues and the freedom from having to pay tribute to the Asian redistributive enterprises also remained. These aims were to be realised through prudent management and by negotiation. The use of force was to be held in reserve as a strategic deterrent in a finely calculated game of

power before being actually used, and the servants were seldom allowed to forget that its financial implications on the commercial balance-sheet had a decisive weight on the Company's final policy. In the early eighteenth century when the naval forces of the Maratha admiral, Kanhoji Angria, posed a serious threat to Bombay's trade and the control of the seas, the Court only reluctantly sanctioned naval operations against him, saying that they had no desire to make war on an enemy from whom nothing worth while was to be expected by way of financial gain.[31] There were, however, occasions justifying and even calling for actual reprisals. Any direct attack on the trading privileges, legitimately won from the imperial court, by local Mughal officers invariably invited armed retaliation. In 1718 the Company was in a particularly warlike mood and instructed the Calcutta Council to capture Indian shipping in the river Hugli if the provincial viceroy refused to honour the commercial concessions recently granted to the Company by the emperor. At the same time it should be remembered that a policy of reprisal was 'like extreme unction, never to be used unless in the last extremity'.[32] Similar remarks were addressed to the Bombay Council who were asked to make preparations for blockading Surat and Mokha if the authorities at these ports failed to render justice to the Company.[33]

The increasingly confident and determined voice that was heard in these years both on the part of the Court of Directors and the Councils in charge of the Indian settlements reflected the growing naval and financial strength of the Company in the eighteenth century. The political weakness of the Mughal Empire did not go unnoticed. Even in 1687 Child had commented on the wars and rebellions in which Aurangzeb had found himself engulfed and predicted that the old emperor had few quiet days to live, though the masterful governor joined his ancestors eight years before the latter.[34] But by 1705 the Court were expressing their fears of spreading disorder in the inland part of India with Aurangzeb's approaching end, and within a decade reports poured in from the subcontinent justifying these apprehensions.[35] The exact relationship between the political instability of this period and the rhythm of economic activity in the Mughal Empire is still very much an open question. Its effect was more severe in some areas than in others. Gujarat and Hyderabad experienced far greater military operations than did Bengal. But even here the changing politics of the time could pose dangers for the Company. In 1725 the Court thought it most necessary, 'in this critical juncture', to cultivate good relations with the Hugli *faujdar* [military under-governor], because 'our opinion shows that Affairs in the MogulPs dominions are in the utmost confusion and tend towards some extraordinary crisis . . . Time only must discover the event of these troubles'.[36]

After the grant of Emperor Farrukhsiyar's *farman* [decree] (1717), which will be examined later, the English East India Company felt that at long last it had achieved complete political legitimacy for its claims of a privileged status in the Mughal Empire. In all future disputes with the local governors, the point was to be repeatedly made that the Company traded in India by right and not by any favour of the imperial officers. Where a particular claim was still contested, the pressure for its acceptance was to be kept up, and in time, it was hoped, due recognition would follow on 'that plea of sallabaud *[salabad]* or custom . . . it being so well understood and of such prevalency with the Moors'.[37] If that failed, there was always the warships and their guns. The Bombay Council reported in 1724 that the new governor of Surat, Rustum Ali Khan, was a 'morose' man who disliked all hatmen, as the Europeans were then called in India. But he received the Bombay President's letter of congratulations in a friendly fashion, being well aware that the English warships commanded the port of Surat.[38] It was in the nation's interest that the Company should appear formidable in the eyes of the Indians, and nothing contributed so much towards this as the constant appearance of the European-built ships of line in the ports of India.[39] In 1734 a governor of Surat was informed that he had a special obligation to 'so opulent and powerful body of merchants' as the East India Company.[40] The message had more than a hint of menace, for it was only a month since the port had been blockaded and threatened by the Company's ships.[41] In Bengal the power and strength of the nawabs since Murshid Kuli Khan's time made the Company far more cautious. Although the Directors at home would have liked the adoption of a policy, in alliance with the Dutch, for curbing the aggressive temper of the new nawab, Shuja Khan (1727-39), the Calcutta Council never felt strong enough to risk an open and complete breach.[42] By the late 1730s even the Directorate had abandoned all thoughts of waging war on the Bengal ruler and contented themselves with the instruction to remind the nawab and his courtiers of the public benefit resulting from the Company's large trade, a benefit that should have been self-evident without the aid of constant bribes.[43]

How did the Mughal ruling class react to the growing power and claims of the East India Company? While there are many well-documented instances of individual protests against specific encroachments or violations of the terms of the Imperial farman by the English, a general discussion of the question was only too rare. However, in a letter written to an Armenian merchant in 1733, Haji Ahmed, one of the ministers of Shuja Khan, complained that in spite of the absolute sovereignty possessed by the nawab, sanctioned by the emperor himself, the Europeans behaved in a very unbecoming manner in his province. Not only did they lay the Koran, which all Muslims put

above their head, under the New and Old Testaments, but also operated courts of justice in the king's dominions according to their own laws and religion.[44] The nawab himself advised the emperor in Delhi against the renewal of the Company's privileges, pointing out that when they first came to Bengal, they petitioned the then government humbly for liberty to purchase a spot of ground to build a factory house upon, 'which was no sooner granted but they run up a strong fort, surrounded it with a ditch which has a communication with the river and mounted a great number of guns upon the walls'.[45] To this accusation the servants of the Company could well have replied that nothing was done without the tacit consent of the political rulers, often purchased through corrupt means. When the governor of Fort St George in a defiant message to Sadatulla Khan, the *subadar* [viceroy] of Carnatic, declared that all English property was being well cared for under the protection of his guns, the nawab merely replied that he had no wish to quarrel with the Company, though the Madras Council should not forget the number of guns that defended the Golconda Fort and the fate which befell it at the hands of the Mughals.[46] The ease with which Madras was later taken by the French (1746) and Calcutta by Sirajud-Daula demonstrates that the military defences of the Company's settlements before 1757 could never have provided adequate protection against a determined enemy in India. If the Mughal authorities allowed the European trading companies to grow to a certain stature of power during the first half of the eighteenth century, it was because they failed to see in them any real threat to their own position. The immediate financial benefits of European trade, as even Khafi Khan, the Mughal historian, pointed out during the troubles of the 1690s, always worked against any radical notion of expelling the Europeans from the country.[47]

The politics of commercial privileges

The concept of the redistributive enterprise, discussed in the previous section, is an essential key to an understanding and analysis of the East India Company's activities in India. The Company was perfectly aware that at home in England its monopoly and other commercial privileges were upheld by the state largely as a result of the financial payments received by the Crown. Apart from the customs duty paid on its imports, the Company was frequently called upon to come to the assistance of the government with large financial contributions. After the union of the two Companies in 1709, the entire permanent capital of £3 million was lent to the Crown and the Company traded on borrowed funds. From the point of view of the British government the East India trade was definitely a source of redistributive profits. There was

little that the Company could do to reduce its political dependence on the Crown and at times the Court of Directors justifiably felt that the heavy rates of duty imposed on trade, together with the fixed costs of the settlements in Asia, made such inroads on the corporate profits that the Company traded more for the benefit of the nation than itself.[48] But the Court was determined that if it was a captive of a redistributive enterprise at home it should not be so in the Indies. More than any other European nation trading with India the English insisted on being exempted from the local customs payments. The ideological justification for this policy was derived from a mental attitude which regarded all Asian governments as oriental despotisms intent on extracting the maximum possible gain from merchants. There were also practical reasons behind the Company's demand for a preferential treatment by the Mughals. It was natural for a monopolistic organisation to seek a position of similar advantage in the purchasing-markets. The Dutch Company attempted to create such conditions by force of arms in areas where Asian rule was weak and unable to offer much resistance. However, in the Mughal Empire it paid the customary rates of duty. It is possible that the difference between the V.O.C. and the East India Company over the question of obtaining special commercial concessions was a result of historical accidents rather than deliberate policy. But for the English it was a fixed and long-term objective, whose aim was to impose a certain degree of control over the Company's political environment in Asia. If the Court could calculate with reasonable certainty what its legal payments to the Asian redistributive institutions were, this in itself would have been a major achievement. The minimising of these charges and the creation of a differential position in relation to other trading groups was the second and the final objective following on from the first.

It is worth remembering that the Company's search for commercial privileges in India and other areas of trade in Asia did not stem from a distaste for redistributive profits based on principles. On the contrary it was an integral part of the Company's own scheme to become such an enterprise in Asia. We can distinguish two closely related aspects of this policy: the role of local taxation and the sale of safe-conduct passes to Indian shipowners. Throughout our period the Court insisted that the Indian inhabitants of their settlements as well as private European merchants, who enjoyed the protection afforded by the Company's privileges, should contribute to the cost of obtaining them. It was the most equitable thing in the world, the Fort St George Council was told in 1684, that whether the Company defended its rights to commercial concessions by bribes or war, the black merchants and the people of Madras should pay the costs. As a preparation for the coming war, the Black Town must be walled round and fortified at the expense

of the inhabitants 'whether it please or displease them'.[49] It was an uncompromising attitude which was made less harsh sounding later without weakening the basic principle.[50] In the early eighteenth century, when Calcutta was rapidly rising to prominence as a trading port, the Company asked a duty of 5 per cent to be levied on the private trade of its servants and the free merchants. The Calcutta Council was, however, unwilling to be burdened by the new charge on their own private commercial profits and put forward the novel suggestion that the Mughal officers in Bengal would object to the Company levying customs duty, as the measure was likely to offend against the concept of imperial sovereignty. The Company saw nothing more than casuistry in the reply. Was not the coast of Coromandel, once the kingdom of Golconda, a part of the Mughal Empire, it was asked. The imperial viceroy, Nawab Sadatulla Khan, had an army of 60000 men under him and resided quite close to Madras, and he never raised any objection to customs duty being imposed on the Company's merchants and servants. Those in charge of affairs in Bengal should give better reason 'why you should enjoy the benefit and get estates without contributing anything towards it'.[51]

It can be seen that the tension which arose between the Court of Directors and the servants in Asia over payments of redistributive profits was of the same nature as the conflict of interest between the Company and the Asian rulers. There were no clear moral or legal guidelines which any of the parties could utilise to support their claims and counter-claims. The balance of mutual self-interest and the deployment of effective force determined the uneasy point of equilibrium. But in its policy of selling passes to Indian merchants, the Company faced little ambiguity. That right, first established by the Portuguese, rested on the European naval power at sea. For the *Estado da India* it was an important political instrument for controlling the trade routes in the Indian Ocean as well as a source of revenue. The adoption of the Portuguese cartaze system by the Dutch and English was no doubt in part the natural response to a common historical situation. The land-based Asian powers could be reminded by this means of a strategic deterrent in the hands of the trading companies. However, the political significance of the pass-system declined with time and it became much more of a conventional way of raising revenue. To refuse the issue of passes or to attack ships which had failed to take them was a step not without its danger. If the vessel belonged to a port where the Company had a substantial volume of trade, the measure could quite clearly invite retaliations.[52] Also at the time of the Red Sea piracies committed by European privateers in the 1690s the pass-system proved to be a positive embarrassment. The Surat governor insisted that the European nations trading at the imperial port must

provide naval protection against the privateers and bear all costs of convoying the Surat ships to Mokha and Jedda.[53] But these temporary setbacks did not obscure the general point that the sale of passes in normal circumstances provided a costless source of profits. In 1719 the Company hoped that, if the Bombay naval fleet succeeded in curbing the formidable maritime power of Angria, it would pave the way to raising the pass-money charged to the Surat shipowners. A few years later the Bombay Council itself thought that the suppression of Angria would enable the Company to impose a general tonnage duty on all Surat ships.[54] Because of Bombay's naval weakness this particular dream remained unfulfilled, but there was no clearer expression of the Company's desire to sell protection and become a redistributive enterprise at least on high seas.

The desire for local revenue which created a secondary set of political relationships between the Company, its own servants, and the Asian merchants was of course a logical extension of the efforts to limit if not abolish altogether the Company's payments to Indian rulers. In some areas of Asia there was no option but to pay the local taxes on trade. The Chinese authorities in Canton, for example, insisted on rigorous compliance with their customs and commercial regulations. In Tong-king during the period of the Company's brief trading, the factors were told that they were at perfect liberty to leave the kingdom but while they resided within the king's jurisdiction they must submit to his will.[55] Elsewhere the servants negotiated special agreements. However, it was in the Indian subcontinent that the Company's most intensive diplomatic activities were to be deployed over the question of reducing redistributive payments. The Court's directives in these matters always took account of three different types of payments. The first and most important category was the regular customs duty, generally levied at *ad valorem* rates, varying from 2 to 3 per cent. Where the Company enjoyed special concession by an imperial edict or temporary permit, the normal payments were compounded by single lump sums paid annually. Finally, all local governors and officials demanded separate presents as a condition of allowing merchants the right to unhindered trade. The effect of granting commercial privileges to the European trading companies by a distant imperial court in Delhi was to make their demands even more persistent. No legal claim is of any practical value unless it is capable of being enforced and here was a perfect opportunity for the Mughal officers to exact a price for compliance to superior orders. The companies generally paid the price, because it was simpler and less expensive than sending embassies to the imperial court.[56]

One of the main issues in the conflict between the European traders and the Mughal officials arose in the seventeenth century from the

inability of the trading companies to understand that a farman granted by one emperor needed renewal by his successor to acquire the same legal force. When the Company's Bengal servants began to advocate actively the idea of obtaining a farman from the new emperor, after the death of Aurangzeb, the Court of Directors repeated what had been said many times before. The Company ought to stand on the validity of its ancient grants which 'being mutual stipulations between the then Princes of the Country and us ought to be obligatory on both sides as long as the occasion on which they were granted ... continues'.[57] The high costs of sending embassies to the imperial court and the large presents that were needed to be lavished on the influential court grandees explain the Company's reluctance. But by 1714 the Calcutta Council thought it imperative that a fresh statement of the Company's legal status in India should be obtained from Delhi. A mission headed by John Surman was despatched to north India in 1715, and after a year's negotiation the famous farman of Farrukhsiyar received the imperial seal in 1717.[58] The most important provision of the imperial edict was to make the English Company customs-free throughout the Mughal Empire. In return it was agreed that the Company should pay Rs 10000 at Surat and Rs 3000 in Bengal per annum. The English were exempted from customs dues not only at the port towns but also in the interior areas of trade, and a certificate or *dastak* issued by the Company's servants was accepted as a proof of identity that the goods belonged to the English Company. The effect of these provisions in the farman was to establish the Company as one of the most privileged groups of merchants in the empire. When Surman examined the Surat customs records during the course of his negotiations, he was surprised to discover the increase which had taken place in English trade with the port, and in the tradition of a true redistributive agent he recommended that a separate duty should be levied by the Company on the trade of private English merchants in return for the Company's agreement to cover their merchandise under the terms of the farman.[59]

This was a view with which the Court of Directors found little disagreement.[60] But it proved far more difficult to persuade the imperial officers in Surat and Bengal to enforce the farman. In Surat the governor demanded Rs 200000 to confirm the grant and his demands were reduced to Rs 70000 with difficulty.[61] The question of the customs may have been settled once for all by the farman of 1717 but not the financial presents claimed by the provincial officials. In fact, after the final legalisation of the Company's privileged status, a new danger arose of the Mughal governors deliberately provoking an armed confrontation with the Company in order to extract a large payment for reopening its trade. In the eyes of the Court the farman did not diminish the necessity for vigilance in dealing with the country govern-

merits, though it had lessened the price of maintaining peace. It must also be said that the corruption of the Company's own servants may have inflated the amounts spent under the heading of political or *durbar* charges. The recipients of bribes do not issue written acknowledgements, and it was very difficult for the Company's Auditors at home to check the truth of an allegation. But there were occasions when the Court was openly incredulous that such large sums as were entered into the account books could have been actually demanded or paid for political presents.[62]

The pattern of conflicts and alliances

The financial abuses and the charge of corruption in the internal management of the Company's affairs in India, which become increasingly evident from the 1720s, had the same origin as the accusation of extortion made by the Court of Directors and their officials alike against Asian rulers.[63] Without substantial payments, President Rolt had said in 1680 that nothing was to be done with these 'sordid Moores'. In 1740 the Court is protesting against similar practices adopted by the servants: 'We can never expect a faithful Discharge of the Trust reposed in our servants if they allow themselves to be corrupted by Duallys *[Divali]* Bribes or New Years Gifts, let them be called by what name soever, the thing is the same.'[64] Profits derived from special privileges, which were themselves supported by force and purchased by bribes, inevitably attracted competitors. The result was a clear stratification of financial interests involving the Mughal officials on the one hand and the Company and its servants on the other, with the Indian merchants having to pay redistributive profits to both parties. As long as there was a clear understanding between the two main contending interests what the mutual limits of tolerance were, the system of pay-offs worked without an actual recourse to arms. But the mechanism broke down when one party attempted to tilt the balance of advantage in its favour.

An analysis of the basic features of the many conflicts that took place between the Europeans and the Asian powers in our period reveals a remarkable consistency of methods. When ordinary negotiations failed to resolve a dispute, both the contenders threatened to use force. A naval blockade of Asian ports or the capture of Asian merchant shipping was the European answer to their vulnerability on land, but such a policy was not without its cost. In the first place, there was a distinct possibility for the European servants, if they were unable to escape from the factories, that their lives might be in danger. At the very least they would have to endure siege conditions with supplies of food and water cut off. A greater penalty than the risk to the servants was the

cost to the trading companies of an interruption in their trade. The naval blockade required very careful timing in order to achieve maximum effect. Not only was it necessary to ensure that the Company's Europe-bound ships did not lose their passage but care had to be taken that the Asian vessels did not miss their voyage either. For the mediation of the local merchants was absolutely essential in reaching a final settlement, and the pressure exercised by them on the port authorities was likely to remain strong only so long as they believed that they could yet retrieve the trading season. It was clearly in the interest of everyone concerned that a conflict should be strictly limited and that the use of force applied only progressively.

The unsuccessful outcome of the war of 1688-9 demonstrated the strength of the Mughal military and administrative machine and vindicated Pietro della Valle's prognosis of 1624.[65] I* also proved something else that the Company was not inclined to forget easily in future: naval warfare was far more useful to the Europeans as a deterrent than as a tactical weapon. During the period of war the Company's direct trade with England had virtually come to a standstill. Of course the Surat merchants also lost heavily and through them the customs revenue of the port failed. This was a point not lost on the Governor of Surat and obviously the loss of trade and customs induced him not to pursue the war against the Company. In the first half of the eighteenth century, the pattern of conflicts changed significantly, though not the political methods. Perhaps a fundamental reason for the change lay in the gradual polarisation of interest between the court of Delhi and the Mughal provincial governors on the one hand and between the Company and its servants on the other. There was a general escalation of violence on all sides, which eventually drew in the European trading companies. The provincial rulers acquired a much greater degree of financial and political control over local areas than was possible under Aurangzeb and his predecessors. An increase in the financial stake of their office was likely to carry at the same time serious political implications for the Europeans in general, as it did also for the indigenous merchants and the landed classes. One way of avoiding involvements in local politics, the Court of Directors believed, was to maintain strict neutrality.[66] This, however, proved difficult to implement, as the servants of the Company had separate private interests of their own which stood to gain from participation in provincial politics.

A clear sign of the changing nature of the Mughal imperial administration was the open sale of offices. Amanat Khan, the governor of Surat, the English Council reported in 1710, had returned from Delhi after having spent six *lakhs* of rupees in presents, which secured the continued confirmation of his governorship.[67] The Factory planned to start negotiations with him soon and hoped to obtain as good com-

mercial terms as the Dutch. In 1717 the Madras Council faced a more urgent problem which they categorically traced to the financial pyramid that was being created in the empire. The Company's trade had been stopped in the areas adjacent to Madras by the local revenue collector, because it was alleged the English had given political sanctuary to absconding under-farmers of revenue. According to Joseph Collet, the governor of Fort St George, the land rents were raised so much as to make it difficult for the people to pay, and it was raised because 'the Prime Ministers press the Nabobs for presents, they squeeze the under Governors and those the People'.[68] That this was not an isolated view is proved by the record of an interview between the Bombay Council and Seth Laldas Vittaldas, the great Surat merchant who acted as the Company's broker. Every trader in Surat was apparently obliged to make a substantial present to Governor Momin Khan Dehlami who had given two lakhs of rupees himself to the emperor in Delhi, and similar amounts to his ministers. As the king was in the habit of selling the governorship of Surat frequently, the presents to courtiers were a continuous drain on the Surat governor's resources which he had to recoupe by taxing the merchants. As the East India Company enjoyed commercial rights superior to the emperor's own subjects, Momin Khan took the view that it could not long remain excused from paying the general levy. If the Bombay Council insisted on being exempted from it, the Surat Customs House would certainly make a distinction between the Company's official trade, covered by the farman of 1717, and the private trade of the servants, which was not.[69] Because of the rapid growth of English private trade in the Indian Ocean during the first three decades of the eighteenth century, the Mughal port officers now possessed a double advantage. An interruption of trade caused by a naval blockade or a dispute on land was likely to prove as damaging to the East India Company and their servants as to the Indian merchants. The Company's officials had every inducement to maintain a close understanding with the Indian political authorities, if necessary at the financial expense of their employer. The reverse situation was of course a breakdown in good relations which could be rectified only through direct political or military action with or without the sanction of the Company at home. It was not without ample justification that the Court of Directors was despairingly to remind Bombay in 1738 that 'the Society whom you serve are a Company of Trading Merchants and not Warriors'.[70]

Apart from Malabar coast where the Company's factories had been involved in sporadic military operations against the local rulers, the first active intervention by the English in Indian politics took place in Surat in 1732. An oppressive governor was forcibly driven out of the city by an alliance of Indian merchants and the East India Company.[71]

Just before the start of the Surat 'revolution', Laldas Vittaldas, within three months of his own death, wrote a long letter to the Council in which he presented a powerful analysis of the malaise that had overtaken the political administration of the Mughal Empire. The privileged status granted to the English by the farman of Farrukhsiyar, he thought, could be maintained only through continuous financial bribes to the Surat governor. 'Consider, gentlemen,' Laldas wrote, 'you have a Governor to deal with who by force of arms has maintained his post in rebellion against his Sovereign, against whom he has shutt his gate in the form of Mustapha Caun [Khan], presented with royal grants for the Government of Surat.' This could never have happened, he continued, but for the paralysing faction struggles that went on in Delhi. When the Surat Council came to discuss the letter they admitted that the annual compounding fee of Rs ioooo was only about a fifth of what the government would receive if the normal rates of duty paid by other Europeans were imposed on English trade. Furthermore, the news of very large sums being presented by Calcutta to the nawab of Bengal had not helped political relations in Surat.[72] The reference to the events in Bengal was significant, for there, too, tensions erupting into sudden violence between the English and the nawab arose from problems over the servants' private trade. But both Nawab Shuja Khan and his successor Alivardi Khan were soldiers and strong rulers. While they ruled Bengal there was no question of the Company blockading the river Hugli as was done under Murshid Kuli Khan, who in spite of his outstanding abilities as an administrator was not inclined to use force against the trading companies.

With the accession of Shuja Khan to the *subaship* of Bengal in 1727 the Calcutta Council suddenly discovered that their room for political manoeuvre was much reduced in the province. By 1731 they had come to believe that the new nawab was a 'rash inconsiderate' man who would not hesitate to use his sizeable army in any dispute.[73] An endemic source of political differences between Murshidabad durbar and Calcutta was the abuse of the dastak system by the English, and even the Court of Directors at home agreed that these irregular practices were the main cause of the financial exactions imposed by the Bengal government on the Company. There was also one other area of political relationship where the nawab was not prepared to tolerate European intervention: the violation of the neutrality of his port. When the Calcutta Council, acting under instructions from home, decided to attack the ships of the Ostend Company in the river in alliance with the Dutch (1729), orders were actually issued to the Hugli faujdar to prepare military action against the European factories. The affair was settled only after the two Companies agreed to pay the nawab a large compensation amounting to Rs 325000.[74] The tradition of neutrality

which had broken down so spectacularly in the Coromandel coast was kept up under Alivardi Khan also, the most famous example being the case of the ship *Ckandernagore.* This ship belonged to the French Compagnie des Indes and was chartered by an Armenian for his private trade. In 1745 the ship was captured and made a prize by a squadron of the Royal Navy which had been sent to the Bay of Bengal to operate against the French men of war. The nawab, however, compelled the Calcutta Council to restore the ship and its goods to the owner, brushing aside the argument that the Company had no authority over officers of the Royal Navy. It could not have been the intention of the king of England, he said, that his warships should make prizes of vessels which were rightfully the property of Mughal subjects. If the Company had any complaints, they should be addressed to the English government.[75]

The uneasy status quo of this kind continued in Bengal until Sirajud-Daula's attack on Calcutta in 1756. But in south India, of course, the Europeans had become involved in dynastic wars much earlier. There the pattern of development was much closer to that of Surat. The weakness of local rulers, combined with a massive political ambition on the part of the English and the French, provided an ideal condition for intervention. The rewards from non-commercial profits came early to Madras and Pondicherry and the Court of Directors' own sensitivity to French commercial and imperial proliferation in India helped its servants to press on with the political plans. It can be suggested that if the Anglo-French conflicts in Coromandel were part of the larger European struggles, these could be waged on Indian soil without raising the question of neutrality only through a political alliance with the local rulers, who were themselves at war with one another and prepared to welcome assistance from European powers.

7
MARKETS, MERCHANTS, AND THE COMPANY

The structure of the selling market

The existence of any kind of interregional or international trade subsumes the existence of two separate markets, distinct from each other in space and concept. The structure and organisation of buying and selling markets need not be similar for trade to take place, and in fact all through history they have differed widely from one society to another without impeding the free flow of goods and services between them. However, such differences demand considerable flexibility in commercial techniques on the part of merchants and traders who stand as the vital connecting link in the chain of economic transactions from the producers to the final consumers. The unique quality of English and Dutch trade with Asia, as conducted through joint-stock companies, sprang from the attempt to impose a centralised and bureaucratically directed system of exchange and distribution on markets that were traditionally decentralised, fragmented, and oriented towards individual efforts. This generalisation applies as much to the selling markets in Europe as to the Asian purchasing markets, though on the selling side the chartered companies successfully developed a marketing arrangement that greatly simplified the decision-making process and the complex calculation of risks and uncertainty associated with early modern trade. From the very beginning of their commercial relations with Asia, both the Dutch and English East India Companies made surprisingly little effort to reach the consuming markets directly. The distribution of the imports which provided the bulk of corporate profits was left either to the individual members of the companies or to wholesale specialist dealers. From the 1650s the English Company adopted the practice of auctioning its goods in four quarterly sales held in London, and the economic response of the buyers at these sales provided the managers of the two organisations with the necessary information about the state of the market and possible future trend in demand.[1] The regulation of the volume of trade at the Asian end was largely a function of this simple mechanism located in Amsterdam and London, which acted as a central clearing-house for East India trade in Europe.

The emphasis which the chartered companies placed on following

standard administrative procedures makes it far easier to describe their selling arrangements at home than to find analytical reasons for the adoption of such methods. But before the analysis is taken any further, it will be convenient to say a few words about the definition of the term market. Theories on markets can be grouped into three conceptual categories, all of them characterised by the necessary assumption that the term involves an exchange of some kind. A market may be defined first of all as a form of economic behaviour. It is also a locus in space where the physical process of exchange takes place. A corollary of the spatial definition of the market is its dynamic features; time is an important second dimension in its measurement. Finally, a market can be taken as a sociological phenomenon, in which various social groups perform differentiated functions, between merchants and brokers, or the pedlar and householders, and the political relationships which characterise the contact between rulers and merchants in particular also involve wider questions of power and social stratifications. It can be readily seen that the structure of the market in which the trading companies operated in Europe possessed the necessary features of all the three different levels just outlined. As the recipients of a legal monopoly in the home market, and with tightly controlled membership, the V.O.G. as well as the East India Company had a very special relationship with the state and the public. While the monopoly clearly defined the first and essential condition of the selling market, the composition of the stock-holding members points to a possible explanation for the functional separation between the Company as a central distribution agency and the wholesale trade. There is no question that the most influential group exercising power within the English Company was composed of the professional merchants in the City of London. The entry qualification for the election to the Court of Directors - a minimum of £2000 in the Company's stock - was sufficient to discourage the general investors, who had bought the East India shares in the hope of purely financial gains, from contesting the power and decisions of the trading groups. As most of the members of the Directorate had private commercial interests outside the Company and were often substantial exporters to foreign markets, it was in their interest that the Company's import function should be kept separate from the secondary task of wholesale marketing. It is not being suggested that this group was not interested in maximising the corporate profits and dividends. It was just that they were reluctant to forgo an opportunity of making a further gain by purchasing the goods imported by the Company and reselling them in the consuming markets of Europe, Africa, or the New World.[2]

Another factor which could have played an important role in limiting the Company's selling activities was the commercial specialisation and conventions that had already developed in Europe. The Company's

quarterly sales were attended by dealers from Holland, Germany, and eastern Europe. They knew intimately the actual conditions in these distant regional markets, the volume of stocks left in the hands of retailers, the price of substitute goods, the precise time for shipment through inland waterways before they froze up in winter, and changes in consumer taste.[3] It should not be forgotten that even in the seventeenth and eighteenth centuries the legacy of medieval ideas on the separate function performed by the foreign trader, the domestic retailer, and the travelling chapman was still strong, and that a desire to minimise transaction costs through specialisation was always reinforced by a moral tradition which allocated specific roles to separate social groups. The East India Company, for example, often felt obliged to reserve a certain quantity of its Asian imports for the City linen drapers or the grocers, who were apt to complain if the foreign dealers at a time of short supply managed to secure the entire stock of goods offered for sale.[4] There were even occasions when the Directorate continued to import unprofitable lines of textiles from India merely because the African traders in London insisted that it was their duty to do so.[5] This was perhaps an exceptional case, which proves the general point that economic considerations in our period were always an integral part of a larger value system. The tradition of co-operating with other economic groups and utilising the existing institutional arrangements extended to nearly every branch of the Company's commercial activities at home. In the early part of the seventeenth century, the Company built all its ships in either of its two shipyards on the Thames. But as the trade became well established and the possible demand for shipping required by the Company became known, the practice of direct construction was discontinued and the Court was able to charter its entire annual tonnage from shipowners who bore all the risks. In the provision of the Company's export goods, as for instance broadcloth and silver, the Company never even considered going either to the producers or to the primary sources of supplies. There already existed in England and in the Continent a well-known dealer-network that was perfectly capable of supplying the Company with the necessary quantities of the export goods according to its own time-schedule and at the cheapest possible costs.[6]

By offering its import commodities in public auctions at specified time-intervals and in one definite location, the Company was able to set up a simple institutional arrangement whereby the buyers and sellers could make contacts. It is of course a truism that no trade or complicated economic exchanges can occur unless both sides to the buying and selling operations know when and where they can meet. If the market is characterised by slow means of transport and communication, it becomes difficult to stabilise prices without the stockholding, which would tend to smooth out excess supply or excess demand. The great distance

which separated the supply and consuming markets in East India trade and the long time-span elapsing between commercial decisions and their implementation made it notoriously speculative. The instability of the pepper trade in sixteenth-century Europe arose precisely because the quantity and the timing of pepper supplies arriving from the Indies were not always predictable and the resultant fluctuations in prices made it a profitable commodity to speculate in provided one was lucky in guessing the future course of the market. The V.O.G. and the English East India Company had their full measure of experience of the extent to which the pepper trade needed careful regulation in order to avoid heavy financial losses, and from the middle of the seventeenth century their managerial committees continually strove to strike an equilibrium between the supply and demand of all their import commodities.

The quarterly sales were admirably designed to remove the irregularity and the seasonal nature of the supplies. The Company's main homeward fleet generally arrived back from the Indies during August and September, though a few ships could arrive earlier or later than these two months.[7] It was clearly inadvisable to try to sell the entire stock of goods brought home by the summer and autumn ships in one single auction. By spreading out the stocks over the whole year, the Company not only hoped to prevent a sudden slide in prices but also provided the buyers with a means of predicting the market. In some cases the Committee of Warehouses was prepared to go as far as to give a definite guarantee that once a certain quantity of a particular commodity was sold in an auction, no further stocks would be released on the market before a specified date.[8] Such an assurance at once reduced the risk of market fluctuations arising from the Company's own action and it encouraged the buyers to offer higher prices at the public sales. It is interesting to note that the underlying assumption in the economic behaviour of the Company and its associates in Europe was typically monopolistic. The crucial decision variable was the control over supplies, and demand was treated more or less as a given factor which varied according to a known random function.[9] The notion that sellers in general have no control over prices under conditions of perfect competition and that they can offer as much of their products as they wish without affecting the market was certainly not applicable to the East India trade of the seventeenth and eighteenth centuries. The Company's own selling methods in Europe were based on its experience of an oligopolistic market. Supplies were controlled over time according to calculations that took into account the strategy of the rival Dutch or French Companies, the cost of holding inventories, the elasticity of demand, and the level of current prices. These considerations would have applied just as much to the Company's wholesale dealers at another level of marketing, and it must be assumed that the policy of the Warehouse Com-

mittee was influenced by the desire to make the market as predictable for their customers as the Company wished it to be for itself.

A second and equally powerful argument in favour of the public auction system in selling the Asian imports came from the nature of the information it provided to the buyers and the sellers. Before the sales actually took place, a printed list of the total quantity of each type of goods offered and the prices at which bids were to be invited were circulated. A potential buyer thus possessed complete information on two very important points, the quantities available and the seller's price offer curve.[10] During the auctions prices were determined by competition among the buyers present, again in the full knowledge of rival bid prices. It was possible of course for the dealers to form a ring and depress prices. But it is significant that in relation to their London sales, the Court of Directors never referred to the formation of rings, although such complaints were frequent about market transactions in Asia. Since the members of the Directorate themselves could have organised rings as interested purchasers of the Company's goods, it is possible that they were not anxious to publicise their existence, if rings did occur. By taking the realised bid prices as market indicators, the Company was spared one of the most difficult tasks facing an oligopolist, the determination of the price of his products. The Company always adjusted its orders about future supplies of particular Asian commodities on the basis of prices received in sales. Later when the selling policy on the Company's main imports, the cotton textiles, is examined, it will be seen that the Court even regarded the London auction prices as true universal measures of value.[11]

The geographical and economic characteristics of the Asian markets

The centralisation in the distribution of the Company's goods in Europe was achieved with little difficulty and the long survival of the system points to the existence of a highly developed market structure. But in the purchasing markets of Asia, the commercial methods of the European trading companies followed a more complicated pattern. The complexity arose from the diversity of the trade goods as well as different structural features of the economy and society in different Asian countries with which the Europeans traded. At one end of the scale, there were ports such as Canton, a single point on the vast maritime frontier of the Chinese Empire, where they were allowed to enter but compelled to deal with officially approved local merchants who supplied the European ships with their entire cargo. The organisation of the tea trade was the nearest to the centralised market structure of Europe which the companies experienced at the Asian supply end. At the opposing extreme there was Bencoolen which forced the Malay

population to cultivate pepper for the Company's use through a system of physical coercion and economic motivation. Any historian who overlooks the heterogeneous character of Asian social and economic institutions is likely to misread the nature of the problems which the European companies had to overcome in organising the supply of Asian commodities. These problems can be discussed and classified in accordance with the three analytical categories referred to earlier, the form of economic behaviour, problems of location and space, and the sociological relationship between different groups of merchants and traders. In his classic description of the trading world of Asia in the early seventeenth century, van Leur stressed the role played by the small trader and the pedlar in the distribution of commercial goods.[12] Extreme fragmentation, multiplicity of markets, and unstable prices were the main features of Asian trade according to his sociological scheme.

To support his view of a highly volatile market, van Leur compiled a series of examples from the records of the V.O.C. of which the following is a typical one. In 1621 the agent of the Company in Mokha reported that the failure of the Suez ships to arrive at the port that season had brought to a standstill its entire re-export trade.[13] Both Dutch and English records from the Mokha factories prove conclusively that the entrepôt trade of this great Red Sea port, as well as the price of its sole export, coffee, depended heavily on the fleet of ships which arrived each year from Suez and Jedda. As most of them imported gold and silver specie, any interruption in the annual movement of the Suez and Jedda fleet would obviously leave a serious impact on the commercial life in Mokha and by a chain reaction even as far afield as Surat. But anyone who concluded that such a cause-and-effect situation existed only in the primitive, small, and decentralised markets of Asia has only to look at the commercial repercussions of the non-arrival of the Spanish plate fleet in Cadiz to see what could happen in Europe.[14] Even in the institutionalised market for East India goods in London, a single ship was capable of making a considerable difference in prices. In 1722, for example, the Court of Directors reported that one of the Company's Bengal ships, the *Addison,* was lost at sea with its cargo of fine textiles. In future the Calcutta Council was instructed to lade the returning ships with a mixture of fine and coarse textiles procured from both Coromandel and Bengal, because 'by this means the ladings of our Coast and Bay ships will be reparted more to our minds and turn better to our advantage. For had the news of the *Addisorfs* loss reached us before the sale of our Bengal goods, whereas she was then daily expected, they would in the opinion of all the buyers sold much higher as to have reimbursed us a considerable part of her prime cost.'[15]

Through a selective use of evidence available in European sources it is possible to show that the ordinary entrepreneurial structure of Asian

trade was a sum of peddling activities.[16] The detailed journal of the Armenian merchant, Hovhannes, who travelled in the 1680s all the way from Isfahan, through India to Lhasa, reveals very small-scale operations.[17] There is also Tavernier's description of the itinerant trade of the Indian *banjaras,* the astonishing sight of caravans numbering ioooo-12000 pack oxen carrying rice, wheat, and salt, 'in the places where they exchange these commodities - carrying rice to where only corn grows, and corn to where only rice grows, and salt to the places where there is none'.[18] But it would be quite wrong to assume from these examples alone that the interregional trade of India was conducted solely at the peddling level. The first point we need to take into account in analysing the pre-Industrial Revolution market, whether in Europe or Asia, is that its scale and dimensions were much smaller. It was highly speculative also, in the sense that large differences in prices between one regional market and another gave the merchants the opportunities for making large profits. In view of the high cost of transport relative to the total transaction, a certain margin of price differentials was a necessary condition of trade even in cases where competition among merchants had narrowed the level of profits. If we start with the assumption that the pre-modern trade was independent of the economies of scale and that instability of prices was a feature of the best-regulated markets, it becomes easy to comprehend why the very small trader could theoretically co-exist with merchant princes rivalling territorial rulers in wealth and life-style. The pedlar or the small trader was the commercial equivalent of the peasant farmer. His notional costs almost certainly would have excluded the contribution made by his own labour.

In India the true pedlar was the solitary owner of the pack bullock, such as was to be found on the Goromandel coast, who went from one weaver village to another picking up pieces of cloth which the artisan wished to sell for cash. He could minimise his costs by approaching only the hard-pressed weavers who were in no position to bargain strongly over prices, and his selling techniques would have followed a similar pattern in the converse direction.[19] The Armenian traders, on the other hand, were in quite a different category. They were a group of highly skilled arbitrage dealers who were forced through historical circumstances to develop very flexible and geographically mobile forms of commerce. They were prepared to deal in whichever commodity that offered the prospect of making a profit, and their uncertain political and national status made it indifferent whether they resided in Isfahan, Madras, Surat, or Hugh. An ability to measure the risks of overland trade and a readiness to vary the size of commercial transactions were the special services which the Armenians brought to the trading world of the Middle East, India, and even Europe. But there were also among them merchants whose wealth and position would have compared

favourably with the most successful merchant of London and Amsterdam.[20] In the English and Dutch sources of the seventeenth and eighteenth century the type of trader most frequently mentioned is not one which corresponded to Hovhannes but rather the Indian equivalent of the Medici family, or Fuggers, and the Tripps. The Madras Consultations of the 1660s and 1670s bear ample testimony to the wealth and the extensive commercial operations throughout southern India of Kasi Viranna, who was born a Muslim under the name of Hasan Khan. When he died suddenly in 1680 the Fort St George Council ordered a thirty-gun salute to be fired in his memory.[21] In Surat even more legendary was the reputation of Virji Vora, whose personal fortune was reputed to be worth 80 lakhs of rupees.[22] The concentration of economic power in his hands had become so great by 1636 that the English Council felt obliged to point out, 'Here in Surratt all merchants, as well towne dwellers as those that come from abroad, are so overawed by the overgrowne greatnesse of Verge Vora that, if it be a commoditie which he is accustomed or doth intend to buy, no man dares looke upon it, nor the broker (even our owne, which have sole dependence upon your business) dare not accompanie such a merchant into our house.'[23] It can be assumed safely that the Asian entrepreneurial structure included both great and small merchants, though its organisation was more akin to the Venetian *fraterna* than the impersonal business form of the joint-stock companies.[24]

If van Leur's emphasis on the pedlar was an exaggeration, the same criticism attaches to his second characterisation of Asia's international trade: the existence of 'as many markets as there were towns and ports, each one with its own money, its own weight, its own measures, its own customs'.[25] Of course the multiplicity of money and weights, and even government fiscal regulations, was a constant feature of pre-modern trade. The English Channel marked the separation of two distinct systems of commercial institutions, those of France and England. The provincial mints of the United Republic each issued many different types of coins. But independence of economic institutions between trading centres does not necessarily point to complete market autarchy, otherwise trade would not have taken place at all and prices would have remained unaffected by supply factors, which is a theoretical absurdity. In the context of Asian trade, it will not take long to demonstrate the active operation of the law of market areas; prices of traded goods were determined jointly by the supply and demand conditions in a number of associated market places.[26] As geographical entities where goods and services were exchanged, it is possible to distinguish three types of markets in the trading countries of Asia. First of all, there were the great sea ports which acted as international concourse of merchants engaged in long-distance trade. Mokha, Surat, Masulipatam, Hugh, Malacca, and

Canton, these were all of a similar structure. The second type fulfilled nearly the same functions as the sea ports but they were located in the interior and were more sensitive to economic watersheds and catchment areas. In the final category, we can place the periodical fairs, the *melas* and *hats* of India, where only specialised traders met together to sell and replenish their stocks, although the final consumers were obviously not excluded from them.[27]

The spatial characteristics of the sea ports were typically manifested in a concentration of buyers and sellers at the level of merchandising whose main task was to distribute and collect goods from widely divergent areas. It is true that the coffee supplies which were marketed in Mokha came from plantations with distinct locational contours, just as Surat was described in Pelsaert's *Remonstrantie* (1626) as the metropolitan market for textiles woven in the neighbouring villages and towns.[28] The fact remains that both the markets handled goods which were exported and imported irrespective of the considerations of distance. The reason which lies behind the growth and development of such markets clearly may be found in the provision of skilled service. The efforts made by the European companies to by-pass the Indian middleman in the great port towns, at the initial stage of their trade in India, were an unusual commercial phenomenon and probably stemmed from grandiose dreams of establishing in the purchasing markets a monopoly analogous to that given to them in the home selling market. It is significant that attempts at vertical integration were most evident in the case of the Dutch Company, which was the strongest advocate of a policy of combining armed trade with normal commercial dealings. However, in Surat and other large Indian trading towns where the Europeans had settled, it was beyond their power to command the market. The most that they could do was to become part of the local business community and try to perform the same function in relation to their own trade. The main role of merchants in sea-port towns, as it has already been emphasised, was to act as intermediaries between the producing and the consuming markets which could be widely scattered in space. A little reflection should have convinced Pelsaert, who denied that Surat was anything more than a convenient berthing place for ships, that its economic functions were not after all very different from those of Amsterdam. Both the towns depended for their livelihood on the provision of distributing and stapling services.

It is convenient for analytical purposes to call such towns with a substantial commercial population 'primary nodal markets'. Adam Smith in *The Wealth of Nations* attempted to construct a highly interesting theory of the way in which both the concentration and diversification of their economic activities might take place, though he probably inverted the actual sequence of the historical development.[29] He began

with the assumption that given the same rate of return, every wholesale merchant preferred domestic trade to foreign, and foreign trade to the carrying. In the home market he was much better acquainted with the risks involved and had much greater control over his capital; but in the carrying trade the situation was quite different. The capital which an Amsterdam merchant invested in carrying grain from Königsberg to Lisbon, and fruit and wine from Lisbon to Königsberg was always tied up in these places alone, and no part of it needed ever to come back to Amsterdam. The natural residence of such a merchant, Adam Smith reflected, should either be at Königsberg or Lisbon, and it could only be some very particular circumstances which could make him prefer the residence of Amsterdam. That being the case, the long separation from his capital would make the Amsterdam merchant uneasy, which 'generally determines him to bring part both of the Konnigsberg goods which he destines for the market of Lisbon, and of the Lisbon goods which he destines for that of Konnigsberg, to Amsterdam: and though this necessarily subjects him to a double charge of loading and unloading, as well as to the payment of some duties and customs, yet for the sake of having some part of his capital always under his own view and command, he willingly submits to this extraordinary charge'. It was in this way that any country which had any considerable share of the carrying trade, became the emporium or general market for the goods of all the different countries whose trade it carried on.

It is quite evident that Adam Smith's theoretical reasoning was derived from his observation of the actual trading operations of the primary nodal markets, although the carrying trade or the merchants' multilateral transactions were likely to be a secondary development of their purely bilateral trade rather than the other way round. The merchants of Surat, Masulipatam, or Hugli traditionally sent their ships to a wide variety of overseas markets, stretching from the Middle East to the Java and China seas. But it was only when they had gained sufficient experience of buying and selling the commodities of these areas in their home ports that they would conceivably consider sending ships directly, let us say, from China to the Persian Gulf. Even then, as we know from the available evidence, it was a rare occurrence. The transhipment of goods was more of a general rule in so far as the Asian merchant was concerned, and it was either the European companies or the private traders who specialised in the multilateral carrying trade of the Indian Ocean. However, Adam Smith's theory of the primary nodal market can be formalised in a slightly modified form. Every large sea port or the secondary interior market in the commercial world of Asia included three types of markets: a purely local market serving the needs of the resident population, a wholesale spot market which supplied both the retail trade, the bazaar, and interregional commerce, and finally the

latter's off-shoot, a wholesale forward market. The price formation in each of these three different markets would be a separate process, following different degrees of risks and economic motivation. In the bazaar, competition among sellers as well as among buyers and sellers would presumably fix the level of prices at which the market would be cleared.[30] The distinguishing mark of bazaar transactions is their minute scale and not the nature of their participants. For example, a large proportion of the bazaar customers may be final consumers but they could equally well be pedlars and small middlemen from neighbouring local markets who prefer to use the retail trade of a large town in order to secure a wider choice of goods and keener prices.[31] In our period, the great bazaars of Surat, Ahmedabad, Burhanpur, Delhi, or Lahore were characterised by similar functions, and no European traveller visiting India at this time failed to describe the range and variety of eastern goods sold in the bazaar shops.[32]

The determination of prices in the wholesale spot market was a more complicated process than in the retail market, and the exact mechanism varied according to the different types of commodities offered for sale. However, there is no doubt as to their existence and capacity in the seaport towns to provide cargo for very substantial fleets of merchant ships. Apart from Surat, universally regarded as one of the greatest trading cities of Asia, the wholesale markets of Masulipatam were able in the middle of the seventeenth century to supply the needs of at least twenty ships of large tonnage. The number of ships frequenting Canton, Alexander Hamilton, estimated at 5000, though his descriptions of the seaborne trade of Hugli was more sober.[33] The overwhelming impression conveyed in all these accounts, which can be substantiated from the records of the trading companies, is of busy ports and markets with very large-scale as well as small trading. The annual coastal shipping from Surat and other ports of Gujarat to Hugli carried a heterogeneous variety of goods, some of them in very small quantities, obviously the property of the peddling type of traders. However, there were large consignments of tobacco, raw cotton, and textiles as well among the cargo.[34]

In organising the supply of Asian imports, the trading companies faced a choice of two alternatives. They could buy in the local wholesale market, spot or forward, in the port towns or in the secondary interior markets where they had branch factories or they could approach the producers directly. Both alternatives were tried out at various times in their history and there were differing viewpoints as to which of the two methods was most efficient and economical. In the early years of English trade in India, one group of factors led by Sir Thomas Roe favoured the idea of concentrating all commercial activities in Surat. They did not oppose outright the possibility of establishing factories in

the interior. But such a policy, as Roe outlined in a letter to the Company in 1616, should carefully take into account the nature of the goods and the problem of transport costs.[35] Bulky commodities, 'that eats much in carriage', should be procured from sources nearest to the port. Fine goods on the other hand were much better able to bear the cost of lengthy transport. Roe saw no reason to maintain a separate factory in Agra, even though the region around the town produced the best variety of indigo. In his view it was more economical to give a higher price for it in Surat than to undertake the entire risk and cost of carriage from Agra, because 'the people of this country can transport it much cheaper'. There were in Surat dealers who regularly supplied indigo to the Red Sea traders; once the English demand was known, Roe believed, they would be perfectly capable of providing the necessary quantities at competitive prices. The significant point in Roe's argument is the free operation of the market mechanism, the supply would adjust to demand and prices would respond to the scale of the operation. This is what one would expect in any well-organised wholesale market, and we know that the indigo trade at least was not conducted at the level of peddling. In fact, there were two interconnecting markets in indigo, one situated in the area of production and the other at the port of shipment. The most important determinants of prices in either of them, apart from the size of the crop, were the number of buyers and the prices prevailing in the Middle Eastern markets. In 1670, for instance, the Surat Council asked the Agra agent to make contracts for 400 bales of indigo, as they were 'informed by the lately arrived Bussora ship that the esteem and price of said commodity is much risen there, which news will certainly encourage the merchants here to buy up great quantities and then the price will also rise'.[36] This is not the only evidence of the practice of speculative stock-holding.[37] Two years later, the Company's broker Bhimji Parrack informed the Surat Council that the orders for Agra indigo must be completed by November, otherwise the Armenians and other merchants would 'engross' the stocks and the Company would be forced to buy from speculative dealers at inflated prices.[38] In January 1713, by which time the Company had practically withdrawn from the Indian indigo trade, the Bombay Council recorded in their consultations that the 'great demand for indigo for Persia has made it dear at Surat this three years, so that the merchants had rather send it thither than sell it to the English'.[39] In the interior market of Bayana, prices were stabilised by the operations of substantial Hindu and Muslim merchants who lived in the district and who purchased their stocks directly from the producers on the basis of forward deliveries.[40]

It was not always that the selling side of a particular Asian commodity was so concentrated that the suppliers could influence prices at will. But whatever chance there was for such an occurrence could be mini-

mised through advance contracting. Much has been written about the Indian advance-payment system, under which merchants received a down-payment on the signing of a formal contract and they in turn undertook the prior financing of the products and the producers.[41] A whole nexus of credit relationships permeated Indian economic life and it was an important instrument of social control, but no one has pointed out that the system was essentially a form of forward dealing. If a willingness to hold inventories is a pre-condition of the emergence of a spot wholesale market, forward transactions are a means of reducing price fluctuations and the instability of the market arising from a disequilibrium between supply and demand. For the European traders it had the added attraction of ensuring a certain measure of standardisation. This was a problem that was particularly acute in the textile trade. It is significant that even in the 1670s when for a brief period the English Company attempted to by-pass the Surat cloth merchants and approached the producers directly in the cloth districts of Broach, the advance system was kept intact. In Coromandel and Bengal, where the Company's servants had much less experience of the commercial conditions in the upcountry areas, forward contracts with large wholesale merchants were the general rule. The exact nature of the financial objectives which each party to the bargain attempted to realise can be studied from the numerous contracts to be found in the Company's records. The main feature of the actual negotiations preceding the formal signing of the contract was the bidding process through which agreement was reached over prices. The merchants were initially invited by the Council to submit tenders, sometimes individually but mostly as a group. After examining their prices and the samples, the factory made its own counter-offer, which was either accepted or rejected by the merchants according to their assessment of the current and future state of the market. The price formation in the forward market was evidently a fairly sophisticated operation and involved very careful calculation of risks. One of the most detailed and illuminating of the early contracts is one dated 31 March 1679 concluded between the Company and eleven merchants of Masulipatam.[42] It was a joint liability contract and the whole investment was divided into 84 shares. All but one merchant received one-eighth of the total. Apart from specifying the exact quality, quantity, and prices, the contract also contained a clause stating that a discount of 8 per cent was to be imposed on the agreed prices when the goods were finally delivered. In addition if any of the piece goods fell short of the sample dimensions, a proportionate reduction in value was to be made. The general discount provision was a most unusual condition, and the reason for its inclusion was not explicitly given in the contract. But we can guess as to its origin from the fact that this particular agreement was intended to remain in force for many years without alteration, and the

prices were fixed at a level which took account of good years as well as bad. The risk element in making a possible gain or loss by the merchants is seen very clearly in the following statement, 'And it is mutually agreed between the Agent and Gouncell in behalfe of the Company and betweene the Marchants aforesaid, that this Contract shall be for many yeares continuance ... so that if the same goods happen to be dearer in the Country than at this present time, it shall be the Marchants loss, and if the same goods happen to be cheaper in the country it shall be the Marchants gaine.'[43] The Company agreed not to hold the contract as binding if the merchants were unable to deliver the goods as a result of wars or interruptions caused by the action of political rulers.

The 8 per cent discount clause can be regarded as the East India Company's risk premium on a long hedging which the Indian merchants were willing to underwrite. However, the Masulipatam contract of 1679 was not a true forward dealing. For examples of this type of transactions we must go to the records dating from the first part of the eighteenth century when in all three Presidencies — Bombay, Madras, and Calcutta — the Company's investment was procured through advance contracting. The members of the Court of Directors themselves were not always in favour of prior part-payment of the goods. The inherent risk of default was reinforced, in their eyes, by the fear that the cloth merchants organised in the form of a joint-stock might charge monopoly prices and set up a combination.[44] The response of the Company's officials to any criticism directed at the possible ring formation by the Indian merchants was to treat it as tantamounting to an accusation that they themselves were acting in collusion with them.[45] Such collusions and the consequent rigging of the prices in the contracts did in fact occur, and no amount of virtuous indignation expressed from India could remove the Company's suspicions. The most famous case of rigged contracts in our period comes from Bengal. In 1731 under pressure from home the Calcutta Council conducted a strict inquiry into the whole method of procuring the investment.

During the investigations, it came to light that the broker, Vishnudas Seth, acting in concert with the notorious Omichund, had systematically entered fictitious names in the annual contract and completely corrupted the Company's servants in the warehouses responsible for sorting and grading the textiles. Most of the advance payment on the contract (known as *dadni),* and the subsequent profits, went into the pockets of these two contractors, and the smaller merchants who managed to receive a part-share of the investment were left complaining of harsh usage by the broker. The Calcutta Council now split into two factions over the question whether the broker should be dismissed or not. The majority, including the President, John Deane, were against dismissal, and the reason given throws some fascinating light on the ramifications

of the contract system. The main argument of Deane and his faction was that the removal of the broker would at once throw the whole delicately balanced credit mechanism into confusion and thus impede the investment. 'It is incontestable that the Merchants, who contract for the Investment,' it was recorded in one of the consultations, 'borrow large sums of money to carry it on, before money is advanced that many goods are purchased, and that the Broker must be engaged on that account for relations and friends in a large sum of money and security for all the Merchants in generall. Wherefore his being displaced would immediately bring his creditors upon him, his *Gomastahs* and Agents would undoubtedly trick him and make great advantage to themselves (at the several *Aurangs)* by his disgrace.'[46] Only recently the failure of the Company's broker in Kasimbazar, it was argued, had completely destroyed the English Factory's credit with the house of the *Jagat Shetk,* which was responsible for the most extensive financing of Bengal's inland trade during this period.[47]

These specific examples and the general evidence from the records of the trading companies prove conclusively that in the main port towns of India, the Red Sea, or China, the organisation of the market in the seventeenth and eighteenth centuries followed lines that were to be found in contemporaneous Europe. It was, however, a complex world in the variety of its economic institutions and there were within the same markets many different forms of commercial practices. Furthermore, there is also the problem of dynamic structural changes. The institutional character of Asian markets cannot be taken as immutable through time, and the presence of European traders in many of the primary nodal markets probably set in motion a process of assimilation of new ideas and practices relating to the organisation of long-distance trade. Perhaps the most notable and concrete impact was on shipbuilding. Although exact evidence is lacking, it seems beyond question that the traditional Asian design in ships and techniques of navigation were profoundly influenced by European methods. The active participation of European trading companies and private shipowners in the country trade and in the transportation of freight traffic must have suggested to Asian merchants new areas and lines of investment. The centralised system of purchasing was in itself a powerful force in the integration of the market, continually interacting with the indigenous economic institutions.

Merchants

The theoretical distinctions between one market form and another and the different groups of people involved in the process of economic exchange have been explored most thoroughly - though in a highly forma-

Used manner - by Max Weber.[48] The type of merchants we encounter in our records of the period he defines as a specialised occupational group engaged in trade as a capitalistic profit-making enterprise. The main motivation which inspires their activities is the profit incentive, realised either through straight cash transactions or speculative ventures. They operate in markets that may be entirely free or subject to substantive regulations. The Asian merchant of the early modern period certainly worked with venture capital. The export trade to overseas markets was organised on the basis of the consignment system, which left considerable room for a recurrent disequilibrium between supply and demand. If this is evident from the contemporaneous records, it is equally apparent that the merchants' own experience of the market would have led to the creation of some compensating mechanism protecting their long-term gains. In this sense the risk or the venture element would be bounded within some definite limits. There are other questions one can elaborate and direct at Weber's basic definition of the profit-seeking merchant. For example, who supplies the venture capital to the merchant and how does its owner share in the risks and gains of trade ? If the capital belongs to the merchant, through what process does the accumulation take place. Again, merchants are not the only group that are concerned with trade. They require the specialised services of other people, of shipowners, commodity brokers and exchange dealers. In India, with its multicommunal social structure, the commercial conventions and morality were deeply stratified by the general value system, introducing complexities that did not stem from economic considerations alone.

From the available information, it is possible to suggest a two-dimensional categorisation of the Indian merchants. The first dimension is the functional distinction and the second social affiliation. The most conspicuous and easily identified group was one that corresponded to the notion of a primary nodal market. They were to be found in every large sea-port town. They dealt in a wide variety of commodities, owned urban properties, and were often shipowners on a large scale. The great merchant families of Surat such as the descendants of Abdul Gaffur, the Ghellabies, the Parracks, the Nizamies, and the house of Rustumji Monackji were not exceptional. Merchants of similar standing were to be found in Agra, Lahore, Delhi, Benares, and other north Indian cities, in Coromandel, and in Bengal, although our knowledge of their activities is much more shadowy. In early eighteenth-century Madras, one of the most influential merchants was Sunca Venkatachillum, generally known as Sunca Rama Chitty. He had an extensive share of the Company's textile business, a sizeable stake in the inland trade of southern India, and his commercial operations also included overseas voyages to South East Asia. Sunca Rama's presence in Madras was looked upon as

a major triumph for English civic policy, though in the closing years of his life good relations with the Madras Council were marred by a series of financial disagreements.[49] It was easy for a disgruntled merchant, particularly if he was of Sunca Rama's stature, to make trouble for the Company in its political relations with the Indian powers. The Company had an early lesson of this fact from its Bengal associates, Khemchand and Mathuradas, who dominated the commerce of Balasore and Hugli in the last decade of the seventeenth century. The Company's servants were being continually urged to be on their guard against the political machinations and the monopolising habits of the two Bengal merchants. But in the 1690s when the Company's depleted warehouses in London made it vitally necessary to build up the import supplies from Bengal rapidly, the Court saw no alternative to conducting its trade through Mathuradas. The Bengal Council was instructed to settle all their differences with him and to hold 'a fair correspondence . . . we being well assured, that he is an able, cunning fellow, competently rich, and that his Masters in Dacca are men of very great Estates [,] moneyed men, and who can upon occasion take up what more money they please at small rates'.[50]

This passage seems to suggest that part of the trading capital of the Bengal merchants at least may have come from the investments of the ruling élites. There was certainly a very close connection between the finances of the nawab and the meteoric rise to prominence of the great banking house of Fatehchand, the Jagat Sheth. Political skill and concentration of commercial wealth went hand in hand for any Indian merchant with a claim to eminence, which probably explains why their family fortunes seldom survived for more than a few generations. For a combination of ruthlessness, intrigue, and swift financial manipulations no one in eighteenth-century Bengal could equal the sinister reputation of Omichund, which was acquired long before the Revolution of Plassey in which he appears as a fellow conspirator of Clive. In the 1720s his name is mentioned in the Company's account books as one of the smaller dadni merchants. The first indication of the violence of his business methods comes from the reference to a court case dating from 1731 when he was involved in an attempt to engross forcibly and illegally the opium trade of Rangpur. The Kasimbazar Factory reported to Calcutta that Omichund not only had ingratiated himself with the faujdar of Rangpur but he also employed his own *vakil* [political agent] at the Murshidabad durbar to represent his interests and gave valuable presents to the nawab's officers there.[51] The career of men like Omichund illustrates that under the particular conditions of eighteenth-century India it was possible for a commercial adventurer to amass a great fortune through underhand means. But it would have been impossible for any ordinary professional merchant to establish his name

without a reputation for honesty. If the vulnerability of the large and wealthy merchants to political exactions made them resort to devious operations, at the same time there is evidence that for the bulk of the commercial population there was a strict code of conduct. The trade of the smaller merchants differed from that of the larger ones in being highly specialised. They concentrated on particular lines of goods or on the trade of particular localities. As many of them traded on borrowed capital and on contractual advances, they were subjected to a careful scrutiny of personal character, business acumen, and the extent of creditworthiness.

All European trading companies with a large number of Indian traders on their books investigated their background thoroughly before entrusting them with advanced payments. In this respect the middle-man role of the European broker was crucial. He stood as the essential link between the indigenous commercial agencies and the centralised purchasing organisation of the trading companies. As Alexander Hume pointed out in his Memorie, 'The English and Dutch, who are the greatest Traders in this Country *[Bengal]*, do their business wholly by their Brokers, who are their principal Merchants. Notwithstanding they have numbers of Rich men Established in their bounds, who need no Security, but they find their business the best regulated by having their Merchants act in concert, by means of their Broker, everyone taking upon him according to his force, they know one another better than they can be known by Europeans.'[52] But Hume also mentioned that the trading companies freely employed merchants who had not been introduced by the broker and who were known to be reliable. In this way the Europeans could prevent the formation of a monopoly group among the merchants. Hume's own report on the Ostend Company's merchants in Bengal is one of the most informative documents about the Indian mercantile community of this period. His list contains the names of twenty-four merchants, of which twenty were Hindu and four Muslims. Under the name of each merchant Hume appended an assessment of his character and performance. The Ostend Company's report largely substantiates the theoretical separation of functional categories adopted in our analysis of Indian merchants. The type of market Hume is dealing with is of course the secondary wholesale market of upcountry areas. But there are further variations within it. From the information supplied by Hume, we can identify a class of traders who command a substantial amount of capital, either their own or borrowed from others. Their dealings are typically on a large scale, both in the cash and forward markets, and they are able to organise their own dealer-chain to the producers.[53] The second group consists of much smaller men, whose business was mostly on *arrot* or commission. On the signing of the forward contracts and the receipt of the monetary advances, they immedi-

ately subcontracted with other dealers who paid them a percentage share of the profits.[54]

That the English and the Dutch Companies preferred to deal with the first group of traders in Bengal during the eighteenth century is amply confirmed by the records. The key consideration in their selection was the question of financial security and credit. During the inquiry of 1731 the Calcutta Council compiled a list of merchants whose credit-standing appeared doubtful or who had actually become bankrupt.[55] The one condition common to all of them was their independent position. They acted for their own business and employed their own gomastas. The kind of risk undertaken by such merchants can be seen very clearly from the petition presented to the Calcutta Council in 1732 by Samjee Chitterchurn and Kissenjee. In December 1730 these two merchants had agreed to purchase a quantity of the Company's broadcloth which was to be paid for in fine cotton textiles. The Council, which was severely reprimanded by the Court of Directors for ordering too many fine goods, refused to take delivery of the muslins and repudiated the earlier contract. In the petition the merchants represented that in order to comply with their engagement, they had borrowed 'large sums of money at Interest to send to the severall Aurangs what might be necessary for the provision of those goods and whilst our Gomastahs were purchasing of them and great part of our Money distributed among the Weavers etc the unhappy troubles with the Country Government last year broke out which not only put a stop to all Business but brought on us . . . the heavy expence of 5,600 rupees among the Government's Officers besides the favourable opportunity made use of by many weavers to desert their places of aboad largely in our Debt'.[56] In 1747 the Dutch Company discovered that, once it had become generally known that its leading merchants were in financial difficulties, it proved impossible to procure the investment through them, as no one was prepared to take the risk of standing surety for them. The Chief of the Dutch Company, Jan Kersseboom, pointed out later that the moneylenders and bankers who lived in Santipur, and who were the only people acceptable to the Company as guarantors, excused themselves from this role, all giving the same reason. The advance contracting system had become extremely risky in those parts of Bengal, and the terms which the Dutch Company were offering, they believed, would bring ruin to the most careful and wealthy merchants and with them the guarantors.[57]

The general picture of merchant community and commercial organisation which the records of the trading companies bring to light for this period of Indian history is one of a long established and highly skilled tradition which had adjusted to and learnt to live with chronic political instability.[58] The fact that much of the financial and trading expertise

was confined to closed communal groups and acquired through hereditary channels meant that the social structure itself was able to absorb some of the external impacts. In Bengal one of the devices utilised by the leading merchant families to mitigate political extortions was to open business accounts in the name of minors, often very young children. The true identity of the owners was thus kept secret. Again, commercial transactions took place mostly within the same caste or communal groups. It was unusual for a Hindu merchant to conduct business with a Muslim, though Muslim ships were often employed for overseas trade. Even within Hindu traders members of one caste or community would not easily mix with those of another. The English East India Company itself seldom made use of Muslim merchants. In 1687 Abdul Gaffur was referred to as the Company's greatest enemy in Surat.[59] The identity of interest which a common religion interposed between the Muslim merchants and the Mughal rulers was treated as a sufficient reason for not trusting the former. The violence often suffered by the Company's Hindu associates at the hands of Muslim fanatics provided another ground for discord. One of the most famous cases of Hindu-Muslim clashes, which marginally touched on the Company's commercial interests, occurred in Surat following Aurangzeb's order of April 1669 to destroy Hindu temples and suppress Hindu religious practices. In November the Surat Factory wrote to the Company, 'You have been formerly advised what insufferable tyrany the Bannians endured in Surat by the force exercised by these lordly Moors on account of their religion.'[60] During the height of the persecution, a nephew of the Company's aged broker Tulsidas Parrack was inveigled and became a Muslim. The act was treated as a severe blow by the Hindu employees of the factory and Aungier thought that the affair cast 'some dishonnour to your house[5]. In the end the Hindu merchants decided to leave the city in protest against the violation of their religion, and the commercial life of the port practically came to a standstill. All the shops remained closed, the mint and the Customs House stopped business, and no money could be borrowed.[61] So great was the tension between the two religious communities that even after the merchants had returned to Surat on being promised fair treatment by the Mughal subadar in Ahmedabad, no Muslim trader could borrow money or buy bills of exchange from Hindu bankers.[62]

The Surat disturbance of 1669 was far from being an isolated incident. What is remarkable, however, is that in spite of a long history of mutual suspicion and distrust, the city's communal groups managed to co-exist for centuries. The resilience and the capacity of Surat *bannians* to withstand Islamic pressure did not go unnoticed. In a lengthy private letter written home in 1672, on the social aspects of life in Surat, a servant of the Company commented that the reputation for cunning and

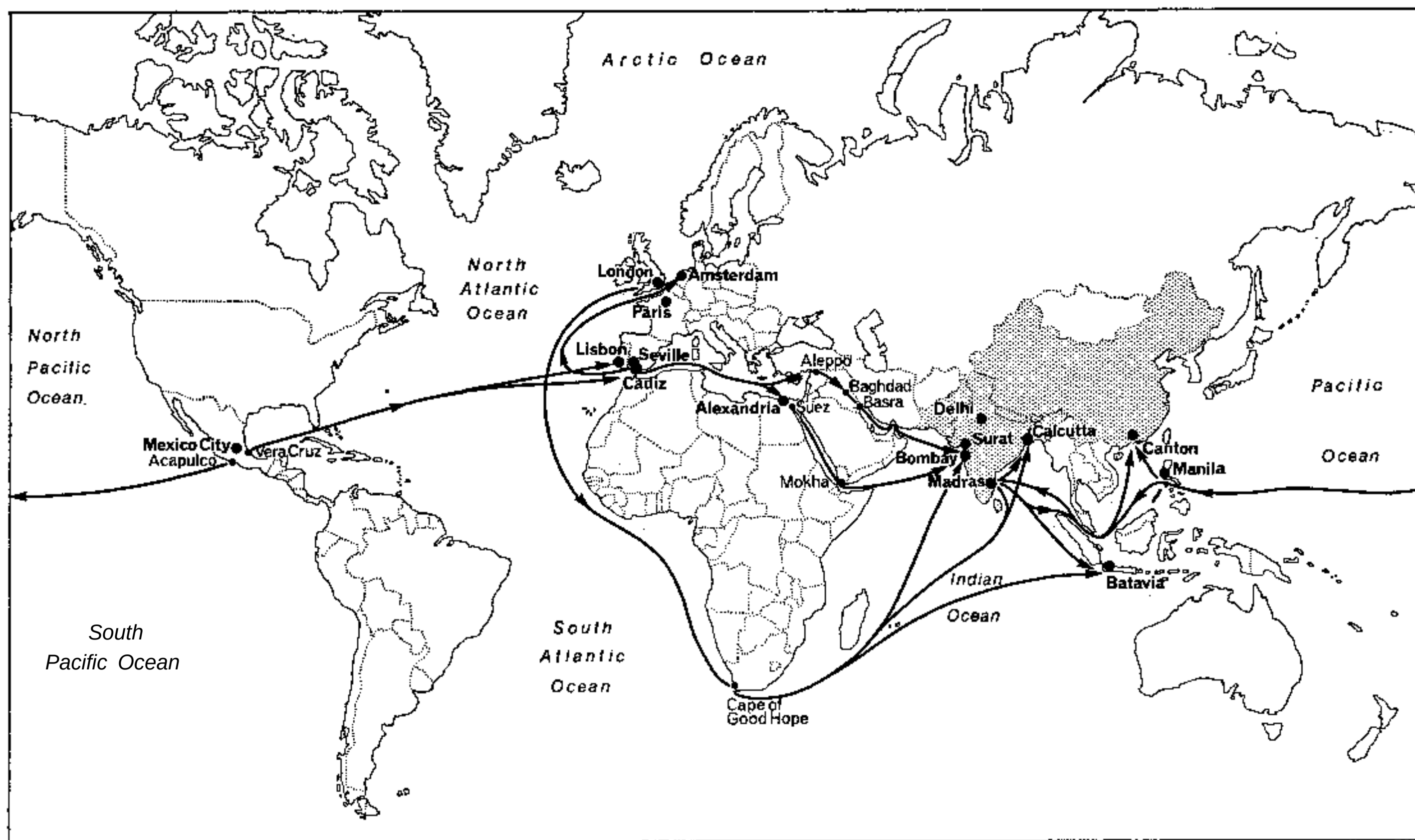
subtlety which the Hindu traders of Gujarat enjoyed was the result 01 being continually exposed to danger and the necessity for preserving their wealth and family integrity through sheer political skills. Tor they are altogether a passive and suffering people, and against all the man} violent assaults that are made upon them have no other defence than their wits and that interest which their money makes.[563] That men such as Bhimji Parrack, the Company's broker, and his brother Kalyandas possessed rational thinking minds and were capable of self-analysis was amply proved to the author of the letter when he and other members of the English Factory in passing discussions on religious practices accused them of idolatry and other moral errors. To this they answered that Hinduism also taught them 'all those virtues which we say oui Religion doth, as humility, patience, temperance, chastity, charity, yea and forgiveness of offences, and for their Idolatry they say they do not worship those Images and Idolls which we see, as we think they do, for they know and believe they are no gods, but only Representations and Remembrances, for God they say is a more excellent being than to abide in a Temple or under a Tree.'

8
THE EXPORT OF TREASURE AND THE MONETARY SYSTEM

The problem of trade balance and equilibrium in international trade

The trading world of Europe and Asia in the early modern period was precariously dependent on a monetary system incorporating a large number of metallic currencies. This dependence on gold and silver for international financial transactions was cast into new dimensions by the discovery and working of the Spanish American mines in the sixteenth century, which set in motion a world-wide movement of precious metals. The old monetary frontiers were rapidly eroded in the process, giving rise to new trade flows, and bringing forward in economic policy-making new ideological issues that were to dominate Europe for more than two centuries. In the contemporaneous economic literature the role and distribution of American treasure throughout the world occupied a large place. As the annual *flota de plata* came into port at Cadiz from Vera Cruz in New Spain statesmen and merchants turned it into an occasion for thanksgiving. Wars could now be financed, the soldiery paid, and the merchant was once again assured of being able to meet his obligations.[1] The enemies no less than friends of Spain looked to the Iberian reservoir to replenish their stocks of money. In the bitter words of Don Geronymo de Uztariz, the high-ranking Spanish official who wrote a treatise on the theory and practice of commerce, the vast treasures which arrived in Cadiz from the Indies contributed nothing to Spain's relief or advantage but were rather to be turned against her government. 'For by this means, they afterwards go in large quantities, into the dominions of the Turks, who set so high a value upon the dollars of Mexico and Peru, that the merchants of Europe, to our disgrace, there negotiate them with a premium of six, eight and ten per cent, above their intrinsic value.'[2] Spanish coins not only passed into Constantinople but also reached the ports and cities of the Maghreb in large quantities, towns such as Sale, Tetuan, Oran, Algiers, Tunis, and Tripoli. This supply of money, according to Uztariz, enabled the Turks to carry on bloody wars against the Christians, 'especially in the dominions of the Spanish monarchy'.

There were other European writers, both travellers and merchants, who had observed and commented upon the outflow of silver from



World silver flows 1650-1750.

Europe to the Middle East and thence to India. Gemelli Careri was one of them, visiting India in 1695. But ^e was certainly guilty of exaggeration when he asserted that all the gold and silver which circulated in the world eventually found their resting place in the Mughal Empire.[3] India was the penultimate destination of the Spanish silver. For beyond South Asia there were still the vast areas of Imperial China which also depended on a metallic currency to support its economic activities. Careri, however, spoke the truth in pointing out the two routes which Spanish treasure took through the Middle East on its way to India. One was by way of Bab el-Mandeb and Mokha in the Red Sea, the other through Smyrna and Persia. The first network rested on the coffee trade of the Yemen, the second on that of raw silk. These facts were well known in Europe, and long before Careri wrote the accounts of his travels in Asia, a prominent member of the English East India Company, Sir John Wolstenholme, drew attention to the three streams by which the greatest part of 'the fountain of silver springing in the West Indies' and coming to Spain was again dispersed over all Asia. The Aleppo and Mokha routes were mentioned by him, as also the exports round the Cape of Good Hope. The total annual value of silver which Christendom lost to Asia in this way he estimated at £1.5 million.[4] There was of course another equally famous route through which silver flowed to the Orient, though it went relatively unnoticed among European observers unacquainted with the commercial workings of the Spanish Empire. This was the galleon trade between Acapulco and Manila. A royal decree dating from 1593 had laid down that the trade between the Spanish Indies and the Philippines was to be confined to two ships of 300 tons each in the interest of the inhabitants of Manila.[5] The galleons were allowed to export in Chinese silks and other goods a total of *250000 pesos de a ocho reales,* and import in return bullion or coins from Acapulco not exceeding 500000 pesos. But the law was enforced with such laxity that in 1602 the *cabildo* of Mexico City represented to the king that the annual loss of silver to the Philippines and the Far East from the Indies came to five million pesos.[6] In the eighteenth century, Uztariz computed the drain at three million dollars, though the decrees of Philip V had prohibited in 1718 and again 1720 the importation of satins, damasks, brocades, printed cotton, and other woven goods from Asia or Africa into Spanish America. Silver was such an essential item in the foreign trade of China that a local proverb of Manila described it as the very life blood of the Chinese: *plata sa sangue?*

Why did Asia absorb these prodigious amounts of precious metals, or to put the question in another way, why was the balance of trade so unfavourable to Europe ? This is a problem on which the historiography of three centuries has left behind a heavy encrustation of opinions and views, though there have been few attempts to search for the causal

factors in a systematic fashion. Even Pliny, who commented upon Asia's absorption of treasure during the Roman times, attributed it to the Roman love for luxury commodities.[8] More recently the pattern of Indo-European trade, the significant imbalance between exports and imports for example, is vaguely explained on the ground that there was a demand for Indian goods in Europe while the absence of such demand in India and elsewhere in Asia is attributed to the rigidities of consumer taste or the unsuitable climate which hindered the sale of woollen cloth, the staple European export. These conditions are no doubt necessary, though hardly sufficient, for a complete explanation. It is seldom asked why consumers in Europe should have developed a liking for cotton textiles in a cold climate. India's importation of gold and silver has received similar answers, and the effects of bullion influx are simply treated as having been neutralised by hoarding and the oriental penchant for ornaments.[9] Again, this is entirely speculative. No evidence is produced on Indian price movements, the volume of annual imports of precious metals, and the Indian requirements of bullion for currency purposes in relation to the size of her population. The theoretical implication of the emphasis on Indian 'hoarding' habits as a neutralising agent of silver imports is that in the subcontinent the elasticity of demand for money as a store of wealth was greater than unity and that the income elasticity of demand for goods was zero. It is difficult to accept such a hypothesis. Hoarding was unquestionably a widespread feature of Indian economic life, but there is also evidence that the price of precious metals fluctuated a great deal in India according to trading conditions and did not universally command a premium at all times.[10] From the evidence provided by the records of the European trading companies on the Indian money markets during the seventeenth and eighteenth centuries, it can be concluded justifiably that in India no less than in Europe the demand for money, in the absence of a market for alternative financial assets, was divided into a transaction demand and a demand for a store of wealth.[11]

It is perhaps no surprise that David Ricardo, the creator of classical political economy and the discoverer of the theory of comparative costs in international trade, should have pointed out the true reason for movements of precious metals, although he was not the first to do so. Bullion movements in Ricardo's view were caused by variations in the ratio of gold and silver on the one hand and the ratio of precious metals and productive goods and services on the other.[12] But Ricardo also went further than this simple explanation, and suggested an elegant answer to the fundamental problem inherent in division of labour and economic exchange. Trade across national frontiers, as his famous theorem shows, is a function of international differences in production costs and prices. Theoretically, the peculiar pattern of Asian trade with Europe

in the early modern period raises two problems. The first is whether the Ricardian theorem on comparative costs, expressed in terms of differences in production costs and therefore 'real' prices measured by factor inputs, is applicable to the Asian situation during this period. The second problem is that of devising a model with both demand and monetary factors which can then be used as an approximate explanation for Asia's persistently favourable trade balances. In the classical theory of international trade, the monetary elements are linked to the 'pure' theory through the adjustment mechanism in the balance of payments. If there is a persistent and large difference in the absolute level of prices between two trading countries, its effect is felt through fluctuations in the foreign exchange market. The Ricardian specie-flow mechanism then restores equilibrium by raising prices in the country with the favourable balance of payments. In the classical analysis it is the relative prices not the differences in absolute prices that determine the flow of trade. For Indo-European trade in the seventeenth and eighteenth centuries, there is no doubt that the commodity composition of trade is partly explained by absolute price differences, which caused the Ricardian specie-flow mechanism to come into operation. As precious metals are universally used to measure domestic as well as international prices, no other definition of their role in international finance is possible, although in India there was evidently a separate demand for gold and silver for consumption purposes. Asia's massive absorption of silver in the age preceding the Industrial Revolution can be explained by the reasoning embedded in this type of model if we treat it as a compensating payment resulting from large trade surpluses.

Contemporary writers, under the influence of mercantilist thinking, devoted a great deal of their attention to the problem of instability in national finance caused by an adverse trade balance. Since gold and silver were regarded as universal measures of value, there was very little that could be done to correct the effects of a trade deficit and to prevent the repercussions of changes in the international monetary system from being felt widely. The phenomena of a scarcity of coins and economic depressions were so universally seen together that there was a natural tendency to connect the two causally.[13] The European East India Companies with their large yearly shipment of treasure to the East introduced a potential source of disturbance in the Western monetary system and because of this they were specially singled out for adverse comments. The East India Company itself was perfectly aware of the fact that its main source of profits came from the sale of Asian goods in Europe, which was made possible by the wide gulf between their buying and selling prices. In a direct comparison between French and Bengal wage rates, the Court of Directors stated in 1736 the former to be six times that of the latter.[14] In the early seventeenth century there were many references

to the Spanish *reales de a ocho* as being worth much more in India than in Europe.[15] Later there was at least one economist who saw a clear relationship between money, prices, and wages on the one hand and the volume and character of international trade on the other. In a treatise published in 1729 and dealing with the coinage problems of the time, Thomas Prior observed, 'As long as gold in proportion to silver is produced in greater plenty in *Asia, Africa,* and *Brazil,* than in the *Spanish West-Indies* it will follow, that the value of gold in proportion to silver will be different in those countries. And farther, these metals being scarcer in the *East-Indies* than in Europe, the prices of labour and manufactures will consequently be lower there than with us, and for this reason we export very few manufactures to that part of the world; but to purchase their commodities are obliged to send specie thither; And silver in proportion to gold being higher valued there by above 40 *per cent* than with us, we yearly export thither silver in great quantities.'[16] Prior went on to speculate that, since the annual exportation of a million pounds in silver made it more scarce in Europe and plentiful in the East Indies, in time the ratio between silver and gold in Asia might conceivably reach the same level as in Europe, which would make their commodities rise in proportion[5].

However, if there was some contemporary awareness of the theoretical relationship between the quantity of money and the price level, a true understanding of the monetary mechanism of international trade was still lacking. As a theoretical explanation of the pattern of trade between Europe and Asia during this period, the following tentative hypothesis may be suggested. In the first place, we assume that because of factor endowment or technological knowledge some countries of Asia possessed a real cost advantage in the production of certain goods which Europe desired to consume. But the money price of these goods, as measured in units of silver, also reflected a significant difference in the price of wage goods in the two continents. While factor prices were generally higher in Europe, at the same time the latter had the capacity to produce silver at a lower cost relative to goods when measured against the price of Asian imports, and this American silver could be utilised as a medium of international payments. The effect of the influx of silver from the New World on Europe, which is the same as an increase in money supply, can be seen as raising prices, output, and total demand. Some of this extra demand probably spilled over into a demand for Asian imports. The mechanism through which these changes were effected was a combination of the income multiplier and the cash balance adjustment process. An expansion in nominal money supply brought about a change in spending behaviour through a rise in demand for real balances and goods. Since the production of American silver continued throughout our period at a high level, the flow situa-

tion was also maintained and there was little tendency for the system to return to the old equilibrium. There is still the question of what happened in India, the largest recipient of European-produced silver, as a result of the massive injection of liquidity that took place year after year. It is evident that the price of export goods as well as food grain did exhibit secular upward movements. Although there was no long-term downward movement in interest rates in India, it is clear that the rates did respond to short-term variations in the supply of money. In all major Indian trading centres there was a well-organised capital market, and the rates at which merchants and traders borrowed money reflected fairly accurately its relative supply and demand.[17] To take a single example, in 1682 the supply of money in Surat was so plentiful that interest rates fell from the traditional 9 per cent to 6 per cent.[18] There cannot be any question that the silver imported by the European Companies played an active and not a passive role. It was coined into current money, and passed directly from their hands to the merchants, and from the latter to the producers of the export goods. It is true that its distribution between traders and artisans was likely to be unequal, but the import of silver represented a rise in demand for output and an injection of extra income. The result must have been *ceteris paribus* a general expansion in the economy of those areas of India that were most actively concerned with foreign trade. In evaluating this line of theoretical reasoning we have to make two qualifications. To the extent that savings exceeded investment, or the rise in money supply led to an increase in the demand for asset or idle balances, the economic growth would have been restricted proportionately. There was also a real cost in maintaining a purely silver currency system. If a constant proportion of the money stock needed annual replacement through natural wear, that amount of silver had to be obtained against exports or physical quantities of goods which represented a subtraction from the total amount of output available for current consumption. The same reasoning also applies to the silver that was demanded for fabrication.

Under the two phenomena of rising prices of export goods and an expansion of the economy, as suggested by our historical model, one could perhaps expect India's absorption of silver to lessen and her import demand to rise. The exact condition under which this would take place, i.e. the trade balance changing negatively, must depend on the proportions of price and income changes and the relative elasticity of demand for exports and imports in Europe and India. India's demand for European imports did in fact rise in absolute terms in our period, though the fundamental structural imbalance in Indo-European trade did not substantially change. With the available evidence it is not possible to resolve this paradox, nor can we trace the precise effects of the bullion imports on the Indian economy.[19] Since India's trade with

Europe was only a part of her total foreign trade, the missing piece in the puzzle is the size of movements in the trade of other areas. It is conceivable that while Indian demand for European commodity imports did not increase sufficiently fast to replace the necessity for silver imports, the trade balance with other areas was less prone to creating a surplus. There is ample evidence that American silver flowing into India was re-exported to China and South East Asia to be exchanged for the economic products of these regions.[20] Again, the three coastal provinces, Gujarat, Coromandel, and Bengal, which initially received the bullion, also traded with other inland provinces of India. These areas may have increased their import demand in the interregional trade as an induced effect of the monetary expansion. The outflow of silver from Bengal to Delhi, in the form of large land revenue payments, is of course well attested.[21] Similar movements very possibly also occurred in Gujarat and southern India.

The monetary system in Europe and the supply of precious metals

In many ways the activities of the East India Company's Committee of Treasure, responsible for arranging the supply of bullion and coins, are highly informative for an understanding of the commercial and financial structure of contemporaneous Europe. If there was one feature of the Company's trade that attracted more attention and polemics than anything else - before the competition of Indian textiles with domestic English products became an acute political issue - it was the Company's export of gold and silver. The use of precious metals for internal currencies as well as for international trade and payments meant that the stability of the European monetary system depended to a large extent on a number of related factors, such as the bimetallic ratios in one country and another, the relative movements in the rates of exchange, and the level of internal prices. The monetary effect of the East India Company's trade with Asia was observed by Sir Isaac Newton, then master of the mint, though it was so well-known that he chose to brush it aside. 'When ships are lading for the East Indies,' he wrote in a memorandum to the Treasury in 1717, 'the demand of silver for exportation raises the price to 5s 6d or 5s 8d per ounce or above. But I consider not those extraordinary cases.'[22] Newton's reference to the seasonal rise in the price of silver, above the price fixed by the English royal mint, was just one aspect of the currency problems created by the Company's exports. Similar cases were to be found elsewhere. In Portugal, when the East India ships were preparing to sail, a mark of silver rose to 7200 rees, whereas at the royal mint in Lisbon it was rated at only 6400 rees. In Spain silver commanded a premium of 5 per cent for domestic payments which temporarily ceased with the arrival of silver in the annual

flota de plata.[23] These variations in the market price naturally affected the official bimetallic ratios and through the bullion dealers' arbitrage operations caused considerable movements of precious metals between different European countries. Since such movements were also the cause and effect of adverse balance of trade, capital transfers and the debasement of coinage and were closely connected with the movements in the rates of exchange, the operations of the East India Company as one of the single largest purchasers of bullion and specie had serious political as well as financial implications. As Thomas Prior remarked in 1729, 'It would be a great advantage to commerce, if gold and silver bore the same proportion in value to one another in all parts of the world.'[24] It was a plea for bimetallism which went unheeded at all times.

The relative value of gold and silver and the cost of extraction in the mines producing the two metals were indeed the two permanent components in the spectrum of causes that determined their supply. As the centres of production were historically always few in number and unevenly located in space, the geographical distribution of the metals was also likely to be highly uneven. Even before the discovery of the Spanish American mines, gold and silver moved from one region to another in response to a change in the bimetallic ratio. Between A.D. 970 and 1250, for example, the output of silver coins in Islamic mints declined drastically.[25] While the Middle East was going over to a gold standard, Europe was coining mostly silver. It has been suggested that the ratio of gold to silver in this period was 1:12 in the west, 1:14 in the Islamic countries, and 1:18 in Byzantium. As a result, gold moved eastward and silver in the opposite direction.[26] But from the middle of the thirteenth century the flow was reversed, and the Muslim world began to return to silver. During the sixteenth century as American silver flooded into Europe, the traditional gold to silver ratio of 1:12 could no longer be held, and by the beginning of our period in 1660 it stood at about 1:16 in Spain.

Contemporary monetary experts were seldom tired of pointing out the consequence to Spanish national finance of the low price of silver. Newton, Conduitt, the latter's successor at the royal mint, and Uztariz all pointed to the debasement of Spanish currency and the outflow of silver from the peninsula.[27] In the late seventeenth and early eighteenth century the monetary system of England experienced very similar effects, which had important repercussion on the East India Company's trade. For one of the economic phenomena of our time was the divergence in the bimetallic ratio within Europe, between the leading trading nations, Spain, Portugal, France, Holland, and England. The result of this divergence was expressed through a rise or fall in the price of uncoined bullion above or below the mint price, as the market re-

Table A.4. *Gold and silver prices and ratios*

Year	Average silver price in London peroz (1)	Silver priced in invoice (2)	Silver % of par 5s 2d peroz (3)	Gold price (4)	Gold % of par £3 17s iojd peroz (5)	Gold-silver ratio market price (6)	Col. 6 as % of mint ratio 15.072:1 = 100 (7)	Gold-silver ratio in India (8)	Indian ratio as % of London mint ratio (9)
	s d	s d		s d					
1661								16.161 :i[	107.2
1665	5 3	5 3		78 6	100.8	14.952:1	99-2	—	—
1666	5 3	5 3		78 9	IOI.I	15.000	99-5	—	—
1667	5 3	5 3	101.6	82 0	105.2	15.619	103.6	21.078	139-8
1668	5 3	5 3	101.6	80 6	103.3	15-333	101.7	—	—
1669	5 3i	5 3i	101.8	79 6	102.1	15.113	100.2	—	—
1670	5 3*	5 3i	102.4	79 9	IOI.I	15.071	99-9	15.722	104.3
1671	5 3	5 3	101.6	79 9	IOI.I	15-190	100.7	16.025	106.3
1672	5 3	5 3	101.6	79 9	IOI.I	15-190	100.7	—	—
1673	5 3l	5 3i	102.8	81 0	104.0	15.247	IOI.I	—	—
1674	5 3i	5 4	102.0	81 4	104.4	15.430	102.3	15.948	105.8
1675	5 3i	5 3i	102.0	82 0	105.2	15-557	103.2	17.224	114.2
1676	5 2j	5 3	100.8	82 0	105.2	15.744	104.4	—	—
1677	5 2J	5 3	100.8	80 0	102.7	15.360	101.9	14.131	93-7
1678	5 3	5 4	101.6	80 0	102.7	15-238	IOI.I	—	—
1679	5 3	5 3	101.6	81 0	104.0	15.428	102.3	14.656	97-2
1680	5 3	5 3	101.6	80 0	102.7	15-238	IOI.I	13.184	87.4
1681	5 3*	5 4	102.4	80 0	102.7	15-118	100.3	13.822	91.7
1682	5 4	5 5	103.2	80 4	103.1	15.063	99-9	—	—
1683	5 4	5 6	103.2	80 8	103.6	14.666	97-3	—	—
1684	5 5	5 6	104.8	80 0	105.2	15-138	100.4	—	—
1685	5 4	5 6	103.2	82 0	105.2	15-375	102.0	—	—
1686	5 3f	5 6	101.6	81 0	104.0	15.428	102.3	—	—
1687	5 4	5 6	103.2	81 0	104.0	15.188	100.7	—	—
1688	5 3i	5 6	102.0	81 0	104.0	15.368	101.9	—	—
1689	—	—	—	80 0	102.7	—	—	—	—
1690	—	—	—	—	—	—	—	—	—
1691	—	—	—	—	—	—	—	—	—
1692	5 9	5 9	111.3	—	—	—	—	—	—
1693	5 7	5 9	108.1	84 0	107.8	15.045	99.8	—	—
1694	5 7	5 9	108.1	84 0	107.8	I5-O45	99-8	—	—
1695	5 9	6 0	111.3	—	—	—	—	—	—
1696	611	611	133.8	—	—	—	—	—	—
1697	6 6	6 6	125.6	82 0	105.2	12.615	83.6	—	—
1698	5 2	5 6	100.0	—	—	—	—	—	—
1699	5 7	5 9	108.1	—	—	—	—	—	—
1700	5 6	5 9	106.4	80 8£	102.7	14.674	97-3	—	—
1701	6 0	6 0	116.0	80 3	103.0	—	—	14.460	95-9
1702	5 7	5 8	108.1	82 8	102.8	—	—	14.247	94-5
1703	—	—	—	80 1	102.8	—	—	14.698	97-5
1704	—	—	—	—	—	—	—	—	—
1705	5 6	5 6	106.4	84 0	107.8	15-273	101.3	15-157	100.5
1706	5 7i	6 0	108.8	84 0	107.8	H-933	99-o	I5-I57	100.5
1707	5 6	6 0	106.4	—	—	—	—	15.157	100.5
1708	5 5i	5 9	105.6	—	—	—	—	I5-I57	100.5
1709	5 6i	5 9	107.2	81 0	104.0	14.617	96.9	15.157	100.5

Table A.4. *(cont.)*

Year	Average silver price in London per oz (1)	Silver priced in invoice (2)	Silver % of par 5s 2d per oz (3)	Gold price (4)	Gold % of par £3 17s 1 ojd per oz (5)	Gold-silver ratio market price (6)	Col. 6 as % of mint ratio 15.072:1 = 100 (7)	Gold-silver ratio in India (8)	Indian ratio as % of London mint ratio (9)
	s d	s d		s d					
1710	5 7	5 9	108.1	81 9	104.9	14.641	97-i	—	—
1711	5 6	5 9	106.4	82 0	105.2	14.909	98.9	—	—
1712	5 6	6 0	106.4	—	—	—	—	—	—
i7r3	5 7	6 0	108.1	—	—	—	—	—	—
1714	5 7	5 9	108.1	—	—	—	—	13.184	87.4
1715	5 3*	5 5i	102.4	—	—	—	—	13-397	88.8
1716	5 5	5 6	104.8	—	—	—	—	12.759	84.6
1717	**5 7i**	5 6	108.8	—	—	—	—	12.121	80.4
1718	5 7	5 7	108.1	—	—	—	—	12.971	86.1
i7J9	**5 6J**	5 8	107.2	—	—	—	—	12.759	84.6
1720	5 6	5 8	106.4	—	—	—	—	—	—

Sources: India Office Records, East India Company, Commerce Journals and General Ledgers, L/AG/i/6/vols. 1-8, L/AG/i/i/vols. 2-14; Column 8, *English Factories in India, 1661-1664, 1665-1667,* Factory Records Miscellaneous, vol. 2, Despatch Books, *Records of Fort St. George: The Diary and Consultation Books, ijoo-1720.*

sponded to movements in a neighbouring country. In the 1660s, as we can see from Table A.4 the market price of both gold and silver in London was slightly above par. But the variations were only in the order of 1-3 per cent, and the East India Company at least experienced little difficulty in obtaining its necessary supply of precious metals. The gold to silver ratio again was above par, the official mint ratio being 1:15.072, thus indicating that the public demand for gold was stronger than that of silver. The estimated output figures from the mint tends to confirm this hypothesis. During the two decades from 1660 to 1679, the total amount of gold coined at the mint was £135000 while the coinage of silver was £31 iooo.[28] The period of relative stability in English monetary affairs came to an end abruptly in 1692, although the silver coinage was being progressively clipped and debased for some time before that date. The market price of silver rose rapidly between 1692 and 1696, when it stood at 33.8 per cent above par. With the recoinage of William III the price fell precipitately, only to start rising again from 1699. The gold price also rose in these years, but at a slower rate, which lowered the bimetallic ratio.

These disturbances in English monetary system at the close of the century were symptomatic of a wider dislocation in the supply and distribution of silver in Europe. It is clear from the Company's letters and minute books that the period from 1691 to 1716 witnessed a great short-

Table A.5. *Gold to silver ratio in Europe 1727*

Portugal	14.0159
Spain	15.0827
Holland	14.0570
France	14.0327
England	15.0864

Source. John Gonduitt, *Observations upon the Present State of our Gold and Silver Coins 1730*

age of silver. It is tempting to identify this 'silver famine' with the famous downturn in the production and supply of the metal in the Spanish Indies. The scarcity of silver in Europe during the concluding years of the War of the Spanish Succession appears to have coincided with a similar crisis in the supply of silver in the eastern branch of the Spanish Empire, for the arrival of the metal in India through the Philippines became very irregular during this period. The amount of silver mined and minted in Mexico City between 1693 and 1705 exhibits a great deal of fluctuation and there was a slight downward trend, if indeed we can attach much reliance on the estimated figures.[29] However, there are two arguments against the view that there was a general European crisis in the supply of silver. First, according to a graph of bimetallic ratio drawn by Braudel and Spooner, the European average seems to have risen just at this period.[30] Secondly, recent research has put forward evidence that disproves the theory of contracting silver supplies from the American mines and shows that in the second half of the seventeenth century the quantities reaching Spain were once again on an upward course.[31] The East India Company's own Committee of Bullion treated the scarcity of silver as being caused by interruption to supplies due to the state of war in Europe, which also affected the Dutch trade, and this is an explanation that we must accept for the time being until further research on the arrival of American treasure in Europe proves conclusively what the real situation was.[32]

Whatever the reason for the general scarcity of silver, to which the Committee of Treasure made repeated reference between 1702 and 1716, there was widespread contemporary unanimity on the view that the re-coinage of 1696 had failed to provide a long-term remedy against the debasement of English silver currency. By 1710 the condition of the latter was once more deplorable.[33] Newton's investigations in 1702 and in 1717 established the reason for the deterioration. The bimetallic ratio was too high in England, overvaluing gold and undervaluing silver in relation to other continental countries.[34] John Conduitt's own assays at the mint carried out in 1727 revealed that at 1:15.0864 the gold to silver

ratio in England was even higher than in Spain, as in an attempt to keep the silver money at home Philip V had raised the official price of both gold and silver in 1726 - gold by 12.5 per cent and silver by 18.75. The gold pistoles now passed for 36 reales of eight instead of 32, and the full-weight reale was made equivalent of gf old reales.[35] Because of the mining of newly discovered gold in Brazil, the bimetallic ratio was lowest in Portugal, though the mint price of silver was maintained at a rate in Portugal that caused an acute shortage of silver. In England the fact most worrying the monetary experts was the lower ratio prevailing in Holland and France. Anyone exporting silver to these countries and importing gold in return stood to make a profit of 3—5 per cent. If it was taken into account how often this exchange of silver for gold could be made in a year, it was not surprising that nothing could prevent the exportation of English silver coins except the lightness of those that remained. The inevitable result of the undervaluing of silver was a rise in its market price. Between 1710 and 1760 the price paid by the East India Company for its silver was generally 10 per cent higher than the official price. There was of course a law against the export of English coins. But by melting down the full-weight of freshly minted coins bullion-dealers could make a profit of 6—10 per cent even in England. In the early eighteenth century silver ceased to be coined at the mint, and England gradually went over to a gold standard. 'It is but an uncomfortable reflection,' Conduitt wrote in 1730, 'that we shall have no silver coin left among us but what is light, and that every ounce of new silver . . . will very probably be either exported or melted down the moment it becomes current.'[36]

The East India Company financed its imports from the Indies in the only three ways in which it is possible to settle the balance of international indebtedness, by exporting goods, by borrowing in Asia (sometimes against bills of exchange issued in the Indies and payable in Europe), and lastly by shipping gold and silver from Europe. These operations were not always bilateral. Gold was imported into India by the Company's ships trading to China, though this was part of the last-mentioned method conducted in a different geographical setting. At the European end, the history of the Company's purchases of precious metals falls into two well-defined periods. From 1660 to about 1695 the Company bought both gold and silver almost exclusively in London mainly from the goldsmith-bankers, although foreign centres were not entirely neglected. From the mid-1690s, however, the transactions of the Committee of Treasure became much more diversified and the big commercial houses of Cadiz and Amsterdam came to the forefront. A list of the Company's suppliers from 1665 to 1760 is given in Table A.6. It shows that the bulk of the Company's bullion and foreign coins was

Table A.6. *The East India Company's suppliers of treasure*

	1665-8 £	1669-70 £	1671-3 £	1674-6 £	1677-9 £	1680-2 £	1683-5 £	1686-8 £	1691-3 £	1694-6 £
William Atwill	—	—	—	—	—	—	—	—	—	109282
Edward Backwell	45895	165304	279151	93892	—	—	—	—	—	—
Thomas Gooke	—	—	—	140 268	96298	873019	1149959	289045	—	94013
Duncombe & Bartlett	—	—	42630	74076	2758	—	—	—	—	—
Sir John Frederick	15686	—	—	—	6799	—	—	—	—	—
Sir Elias Harvey	—	2541	—	—	—	—	—	—	—	—
Nathaniel Herne	—	1374	—	—	—	—	—	—	—	—
Nat. & Joseph Horneby	44107	75524	48083	86058	105113	78488	26286	31734	116380	210410
John Lethulier	2 934	—	22269	—	—	—	—	—	—	—
Jeronimo Miranda	—	—	—	33068	—	—	—	—	—	—
Solomon del Medina	—	—	—	—	13065	—	—	—	—	—
Isaac & Francis Meynel	4248	—	—	—	—	—	—	—	—	—
Alphonso & Gomez Rodriguez	—	—	—	69006	93475	46052	—	—	—	—
Thomas Rowe	**10311**	113 601	13812	7246	68175	—	—	—	—	—
John Temple	—	—	50626	137110	97948	79588	—	—	—	—
Sir Robert Vyner	22628	—	—	—	—	—	—	—	—	—
Sir Thomas Vyner	**11001**	—	—	—	—	—	—	—	—	—
Miscellaneous	38947	—	52093	65 942	214005	14466	45133	—	50662	171427
Total	195757	358344	508664	706666	697636	1091613	1221378	320779	167042	585132

Table A.6. *(cm)*

	1697-9 £	1700-2 £	1703-5 £	1706-8 £	1709-11 £	1712-14 £	1715-17 £	1718-20 £
Ash, Welch, & Cooke [G]	934694	589324	—	—	—	—	—	—
William Atwill	—	—	—	457339	408937	167316	76926	—
Braddyl & Herne [G]	—	—	—	—	—	—	122755	36113
Berde & Diaz [A]	188270	288722	—	100727	—	—	—	—
John Brassey	—	—	—	578i5	48940	—	68415	—
George Gaswell	—	—	—	384205	35964	112731	19232	—
Ghitty & Go. [A]	—	—	—	—	—	77152	135328	—
George Clifford & Co. [A]	84749	—	—	175554	412702	279752	801957	599482
T. Gooke & Ward	—	—	—	I735O8	1367	—	—	—
Sir Henry Furnese	—	—	195219	41460	—	—	—	—
Sir William Hodges & Co. [G]	461340	—	—	—	—	—	—	—
Aaron & David Nunes [A]	—	—	—	—	43698	—	71743	H3545
Andrew Pels [A]	—	—	—	—	**10105**	—	—	49908
John Pitt [C]	**1000**	—	—	—	—	—	—	—
Benjamin Poule [A]	147339	—	—	—	—	—	—	—
Senserf & Go. [R]	—	—	—	—	—	—	—	32748
Starford & Free [H]	—	—	—	—	52780	—	—	—
Elias Terrel [L]	—	—	—	32 135	**1412**	—	—	—
Vanderheyden & Drummond [A]	—	—	—	—	**110106**	17425	—	—
Miscellaneous	**3000**	—	40 246*	31601	—	—	—	—
Total	1820392	878046	235465*	1454344	**1126011**	654376	1296356	861796

Note. [A] Amsterdam; [G] Cadiz; [H] Hamburg; [L] Lisbon; [R] Rotterdam. •indicates that the figures are not complete.

Table A.6. *(cont)*

	i720-30 £	I73O-4O £	1740-50 £	1750-60 £
Bank of England	72O65	3*55496	187236	1616393
Aaron & David Nunes	486184	100613	—	—
George Clifford & Co.	358362	—	1821821	141266
Andriev Pells	2 57O985	844433	—	—
Nathaniel Herne & Hancock	592 541	50287	—	—
Hugh Hancock & Co. of Cadiz	—	102403	—	—
South Sea Company	279924	—	—	—
Woodward & Co.	531386	—	—	—
John Blackford	—	133379	—	51802
Edward Ironside & Co.	—	117082	—	—
George Anson	—	—	344495	—
Samson Gideon	—	—	—	483312
George Amyard and Nicholas Magens	—	—	—	143228
Miscellaneous Suppliers	383431	249086	3065879	3359320
Total	5274878	4752779	5419431	5795321

Source. See note to Table A.4, p. 163.

purchased through the agency of a few well-known goldsmiths of the period, the rest being supplied by innumerable small traders.

The Letters Patent granted by Charles II in 1660 allowed the Company to buy and export foreign money and treasure to the value of £60000.[37] But in December the Council of Trade had put forward a proposition to the king that he should withdraw the penalties on the export of gold and silver, because the restrictions were injuring trade by preventing English merchants from bringing their money into the kingdom, where it ran the risk of being detained, and inducing them to leave it instead at Amsterdam or Leghorn. The document was endorsed that 'this freedom is important to the East India and Turkey Companies more especially'.[38] By an Act of 1663 (15 Chas. II, c. 7) foreign gold and silver were allowed to be exported without fee or duty.[39] In the early 1660s the Committee of Treasure was buying Spanish reales and bar silver in both London and Amsterdam, while the Company's short-lived connection with the Africa Company provided a useful means of procuring gold which the India-bound ships often collected directly from the West Coast of Africa.[40] The most common practice adopted by the Committee for the purchase of bullion in London during this period was to invite tenders for reales at a certain rate and to seek out individual bargains with the City traders and bullion dealers. Edward Backwell, the leading merchant banker of Restoration London, was the Company's most important supplier until 1676, when his name disappears from the account books. Of the foreign Jewish bankers, four had substantial dealings with the Company during this period, supplying mostly gold. They were Jeronimo Miranda, Alphonso and Gomez Rodriguez, and Solomon del Medina.[41]Although the East India Company did not experience any general dislocations in the supply of precious metals resulting from currency changes much before 1692, there were individual years of temporary crisis. In 1670 Backwell was unable to fulfil his contract with the Company for supplying foreign treasure because of the non-arrival of the Spanish plate fleet, and he had to obtain a special order of Council to export English gold coins on condition that he would coin a third more than what was exported within six months.[42] During the course of some negotiations with the officers of the mint later in the year, he pointed out that the East India Company paid him 5s 3^d per ounce of silver in ready money which made it impossible for him to offer his silver bullion for coining.[43] Irregular arrival of the Spanish silver and the preference given by the Company to the Spanish coins, which formed the largest proportion of the silver exported in these years, is shown by the fact that when the Bantam Council suggested that Dutch coins might be used instead, the Company replied, Tor Dutch money and Pillar Rials we shall take it into our consideration another year, having already provided sufficient quantities of Seville and Mexico

money, but we have no great inclination nor encouragement to advance Dutch coin.'[44]

It seems that the main difficulty encountered by the Company in these early years was not so much in the overall supply of silver as a growing scarcity of certain types of coins. The entries in the Ledger Books for these years distinguish only between bar silver and reales. But it can be established from other sources that the Company's silver specie came mainly from the mints of Seville and Mexico City. From 1669, however, there was an increasing scarcity of this type of coins, and the Company was forced to export reales struck in Potosi and Lima.[45] In the 1640s technical defects in production at the Potosi mint combined with deliberate frauds had given the Peruvian *reales de a ocho* a bad reputation both in Europe and Asia.[46] In order to restore confidence in the coins of Potosi and Lima, the issue of a new coinage was authorised by the *Cedula Real* of 22 December 1650. In the records of the English Company it was frequently described as the famous pillar dollar, equal in fineness to the Seville and Mexican pieces and true in its weight.[47] But unfortunately the pillar reales were still distrusted in the pepper ports of Indonesia, and the Company urged their servants in Bantam with some exasperation to try to persuade the sultan that the Peruvian new coins were just as good as the output of Seville and Mexico City.[48]

The East India Company's direct purchase of treasure in Spain and Holland and the accompanying rise in the volume of business transacted through bills did not begin on a substantial scale until 1695. Why the Company gradually moved towards obtaining supplies of silver directly from Spain is not quite clear. Wars and deterioration in English currency with the consequent rise in the price of silver may have been part of the explanation. The bullion trade had received a jolt by the financial crisis in the City of London in the spring of 1683, when a number of Lombard Street goldsmith-bankers failed.[49] The panic caused a run on the Company which held large deposits on short-term loans from the public, and in order to restore confidence the Court of Committees thought it necessary to make a public announcement that no bullion should be sent out on the Company's ships until all its debts were paid.[50] In October the Bullion Committee noted that reales were scarcer than usual,[51] but it was nearly another ten years before the crisis began in real earnest. As the Company sought to increase its working capital after the Mughal war it ran into a silver scarcity 'as was never known in the memory of man not to be bought under 5s 6d to 5s 8d per ounce and very little at any rates, occasioned by the warr which had hindered the frequent intercourse between Spain and these parts of England and Holland.'[52] The Company hoped that silver would become plentiful again when ships escorted by the naval squadrons arrived from Cadiz. In February 1694 Thomas Cooke, the Company's

erstwhile silver merchant, now knighted and appointed as Governor, informed the Court that he was making arrangement for the provision of -£iooooo in silver directly at Cadiz or Port St Mary's. His correspondent Samuel Kekwich was to have the money remitted by bills of exchange drawn from London and Amsterdam.[53]

While the Company made alternative arrangements to obtain its silver, the London bullion market continued to rise. In 1696 the price reached the maximum of 6s 1 id for an ounce of silver. The Court wrote to Surat in September 1695, 'We must now acquaint you with a matter ... as strange to you as it is to most people in this kingdom, which is the wonderfull rise of Bullion Silver . . . and pieces of eight at 7s per ounce, gold proportionably . . . occasioned by the very extraordinary dipt and debased money now passing.'[54] As the gold price also seems to have risen by a proportion more than that of silver, the bimetallic ratio was rising in England during these years, and it may well have reached a point where, taking the European ratios into consideration, the private merchants, already deterred by the uncertainties surrounding the official currency policy in England, no longer found it profitable to import silver.[55] The critical factor determining the merchants' calculation was the state of the foreign exchanges. If the rise in the exchange rates was at a slower pace than that of silver, it is possible that the East India Company found it cheaper to buy silver directly in Spain and finance the purchases through bills of exchange. However, lack of safety at sea as a result of the war with France was another fact which obviously contributed to the Company's decision. In 1695 the Court of Committees decided to charter a ship which was to proceed to Cadiz under the protection of the Royal Navy and after taking in its cargo of bullion was to sail to Bombay directly.[56] Once having established connection with the Cadiz houses through Thomas Cooke, the Company found it convenient to continue such arrangements, and between 1697 and J7O2 its East-Indiamen regularly called at Cadiz on their way to India to pick up the consignment of silver.

The two Cadiz firms mostly closely associated with the Company were Sir William Hodges & Co. and Messrs Ash, Welch, and Cooke. In the years 1697-9 the amounts of silver supplied by the two firms were £461340 and £934694, respectively, and they were allowed a brokerage of 0.5 per cent. The methods of payment for the silver was the familiar example of the triangular transactions which characterised much of the Company's continental business. In 1697 the Court authorised the Committee of Treasure to accept bills of exchange payable in Cadiz and a certain amount was bought from Sir Joseph Herne and Samuel Kekwich. For the remaining sum Sir William Hodges was given instructions to draw on the Company in London from Spain. A few months later, however, Hodges informed the Company from Cadiz that

he was finding it difficult to draw the whole amount on London and asked for permission to draw part of the sum on Amsterdam. Eventually, 42 per cent of his total accounts during 1697-9 was settled in London and the remaining 58 per cent drawn on Benjamin Poule of Amsterdam. The account of Messrs Ash, Welch, and Cooke in these years was paid in much the same way; 73 per cent being drawn on the Dutch firm of Gerrardo Berde and Lopez Diaz of Amsterdam and the remaining 27 per cent on London.[57] The Dutch Houses themselves, apart from undertaking to pay the Cadiz bills on the Company's behalf, supplied a considerable proportion of the total treasure. In fact, with the interruption in England's trade with Spain as a result of the outbreak of war in 1702, the East India Company was compelled to rely largely on the Dutch Houses for its supply of silver.[58]

With the shift in the Company's bullion trade to the European countries, the details of its exchange operations become much fuller in the account books than in the earlier years. The transactions directly involving the Company were conducted mainly between Cadiz, London, and Amsterdam, and occasionally also Lisbon when the Company imported Portuguese cruzadoes. Bills were both accepted and purchased in London.[59] That the exchange operations themselves were not always quite straightforward is shown from an account of Messrs Braddyl and Herne of Cadiz in 1717 when the firm drew bills on Clifford and Co. not directly from Cadiz but through Crean and Co. of Madrid, who in their turn settled their account with Cadiz by means of bills of exchange through Seville.[60] Some of these operations obviously involved losses through fluctuations in the rates of exchange as against remittance through bullion shipment. Why then, did the merchants or the Company persist in using bills rather than bullion in their internal trade in Europe ? The answer must lie in the measurement of risks attached to the physical transportation of precious metals. It is an established commercial practice for merchants to prefer bills of exchange to the alternative of sending bullion, unless the rates of exchange are too adverse.[61]

The silver crisis which began with the debasement of English currency in the 1690s continued through the depth of the war years in the early part of the next century. By 1703-4 Mexican dollars were virtually unobtainable, and the general shortage of silver began to affect the overall level of the Company's trade.[62] The conclusion of peace in 1713 did not immediately bring relief, and the loss of the *flota de plata* in the Gulf of Florida in 1715 with an unusually large amount of treasure caused a severe contraction in the Company's silver export in the following shipping season.[63] Gradually the bullion trade returned to normal, and except for abnormal years such as 1721, when there was a Europe-wide credit crisis, and the rebellion of 1745 in England, there were no major dislocations.[64] Up to 1730-1 the Company's old suppliers continue to

hold the stage: Aaron and David Fernandez Nunes, George Clifford, Andrew Pels, all of them operating from Amsterdam, and Nathaniel Herne of Cadiz, now joined by a new partner, Hugh Hancock. During the following decades the Bank of England began to supply silver on a large scale, probably through Abraham Moccatta, who acted as silver broker both to the Bank and the East India Company.[65] Among the new names during the years from 1720 to 1760 were those of Woodward & Co., Edward Ironside & Co., and George Anson. In 1749-50 Samson Gideon supplied silver worth £483312 which was connected with his contribution towards the reduction of the Company's bonded debt and its conversion.[66] But many of the transactions were kept anonymous, and for a substantial proportion of the silver purchased by the Company between 1740 and 1760 we do not know who the suppliers were.

An investigation into the East India Company's bullion trade during the century from 1660 to 1760 establishes beyond any doubt the existence of a multilateral trade and payments system in Europe. We can even go a little further and point to the rise of the China trade and the import of silver into India from Spanish America via the Manila galleon trade as evidence of the East India trade also becoming multilateral in character. The triangular operations through Amsterdam which the East India Company utilised to settle its accounts at Cadiz and Lisbon were reflected, at theoretical level, in the model-building exercises of Alexander Justice's *A General Treatise of Monies and Exchanges.* The latter attempted to demonstrate how, assuming an unfavourable balance of trade between England and Holland, a favourable balance between France and England, and an equilibrium level for France and Holland, money could be remitted to the Low Countries through France on advantageous terms without resort to the export of treasure.[67] From this it naturally followed that the use of foreign exchanges, so far from encouraging the exportation of money, really did prevent or lessen it. What the author obviously forgot to mention was the effect on Holland of a rise in the French demand for bills which, under equilibrium conditions, would probably have led to bullion flows between the two countries. Although the theoretical relationship between exchange rates, movements of treasure, and the mechanism of adjustment in foreign trade was admittedly becoming clearer to contemporary writers, the economic literature of the period still did not provide a clear answer to the question of whether the existence of a multilateral payments system meant that treasure was becoming unimportant for the settlement of international balance of indebtedness.[68] That treasure was still essential for trade purposes is in fact indicated by John Conduitt's observation in 1730 that it was a very great misfortune for any nation, especially a trading nation, to be under the necessity of prohibiting the exportation

of its coin. The example of Holland and several other countries was given as an illustration of the advantages to be gained by the free exportation of money, and since gold and silver, according to Conduitt, were and must be exported to answer foreign demands, it was best to **let** them go out in such a shape as would cost the nation least and produce the most in foreign markets.[69] The East India Company's own export of gold to Amsterdam and its continued importation after 1705, by which date it had ceased to be a direct item of the Company's trade, is yet another indication that the actual trading conditions were still complicated enough to cause a constant flow of bullion between England and at least the Netherlands.[70] Obviously the position of Amsterdam was of great significance and really held the key to Europe's international payments system.[71] For if Amsterdam was financing a large part of west European trade, including that of England with the Baltic, then it is understandable why in Henry Martin's table the largest movements of treasure from England between 1699 and 1719 were in the direction of Holland.[72]

It can be concluded that the problem faced by the European East India Companies in organising their supply of treasure for exportation to the Indies arose from an interaction between three factors, the constraint on the supply of American silver and its uneven distribution in Europe due to wars or other external events, a change in the intrinsic value of different European currencies, and the effect of the Companies' own demand for silver. The impact on the European monetary system of all these three separate developments was identical. With a constant or increasing demand for bullion, any shortfall on the supply side expressed itself in a divergence between the market price and the mint price of treasure. This automatically tended to debase the currency through a melting down of full-weight coins. The same effect followed if the mint price of treasure in a neighbouring country was suddenly raised without a corresponding and immediate effect on the rates of exchange. Silver moved from one country to another in response to such changes through the action of speculators.

Asian currencies, the bullion trade, and the movements of gold and silver

Jean-Baptiste Tavernier, whom Gibbon described as the wandering jeweller who had read nothing but had seen so much so well, aptly devoted a whole chapter to the description of the gold and silver trade of India and its currency practices.[73] His accounts, supported by more detailed evidence in the records of the trading companies, indicate the existence of a fairly sophisticated monetary system which the Mughals had established in large parts of India. Not only did most of the important trading towns possess a mint for the coining of silver or copper

money but the Indian bullion dealers had carried to a high level the intricate art of testing and establishing the intrinsic worth of various foreign coins imported into the country.[74] Thomas Rolt, the English Chief of the Surat Factory, testified to their expertise when he observed in 1682 that the Surat shroffs 'are certainly the greatest masters of their art of any people in these parts of the world'.[75] The Company's servants had learnt from practical experience that the Indian shroffs and bankers, apart from being skilled traders in precious metals, also wielded considerable financial powers. On monetary matters they could exercise almost a monopoly influence. In the words of a Masulipatam factor, it was a strange abuse that the shroffs of India had the power to raise or lower the price of bullion as they pleased.[76] However, in the Mughal mints which were open to anyone who wished to coin bullion, the Company had in theory a practical remedy against the shrewdness of the shroffs, though the exactions and oppression of the mint-masters, the *daroghas,* were denounced as bitterly by the Europeans.[77]

The basis of the Mughal currency system was the silver rupee which was both money of account and a current coin. Gold was also coined in a fixed ratio to silver, but its currency for transaction purposes was limited, as the value of gold coins, known as *mukr* or *ashrafi,* was determined by the market price of gold in terms of silver. Thus the currency standard in areas of Mughal rule can be said to have been based unambiguously on silver. But on the coast of Malabar and in much of southern India the gold standard of former Hindu kingdoms still prevailed, and it was silver which bore a fluctuating value in relation to the money of account, the gold pagoda. In Malabar the Venetian sequins also passed as current coin, and difficulties were experienced by the English in attempting to make their payments in Spanish pistoles and imperial ducats.[78] The acceptability of certain types of coins for commercial transactions in Asia was closely related to the confidence which merchants were prepared to place on their intrinsic metallic content, as it eliminated the bullion dealer and the need for laborious and time-consuming examination and assaying of every individual coin types. In the Yemen and in Persia, the two areas of the Middle East, where the East India Company had to establish currency parities, the standard was silver based. At Mokha, accounts were kept in the form of an imaginary coin known to the Europeans as a 'country dollar' which had an exchange value of 121 for every 100 Spanish dollars.[79] The coinage of Persia was more complicated, but during the period we are concerned with there were two current silver coins, the *shahi* and the *abbasi.* The latter was worth four of the former, and the reales of eight passed for 13 shahis.[80] Further east from India the Spanish dollar was generally accepted for commercial payments in Java, Sumatra, and other islands of the Indonesian archipelago, which was relatively late in developing an

independent currency system. In China the reale had bullion value only, and its sale in the Chinese trading ports was very similar to the method adopted in India. The Canton supercargoes, for example, sold their silver in 1730 at the rate of 121 oz 2 dwt (3766.21 grams) of 94 per cent fineness for every 100 tales. The latter was a weight *[Hang)* and its equivalent in pure silver was treated in the Company's account books as money of account valued at 6s 8d.[81]

From the Red Sea to the Pacific wherever the Company's servants traded (with the exception of southern India of course) they met with coins and money of account whose value was fixed in silver. But it is equally evident that no matter what the official mint price of silver was its real value was determined by the normal demand for money. In India where the Mughal rulers took great pains to maintain the weight and the standard of fineness of their coinage, the rupee in theory was worth more than its bullion value, as was to be expected in a well-regulated monetary system. But one of the strange features of the Indian financial practices of this period was the premium commanded by rupees of the current year's mintage over the issues of previous years.[82] The rate of premium charged for freshly minted coins in fact reflected the commercial demand for money supply and therefore the market price of bullion silver. An unduly high rate would obviously cause bullion or the old worn coins to be taken to the mints for recoinage. If the value of the rupee, which was after all the established legal currency of the Mughal Empire, could vary in this manner, it was to be expected that the value of gold, coined or uncoined, would also fluctuate. Whether it did so or not in reality depended to a great extent on the commercial conditions of particular areas and the state of gold and silver supplies. A report on the local trade of Bengal dated 1661 stated that gold either in coins, bars, or in the form of dust was saleable at all times, 'there being much less difference in the price than silver which rises and falls a great deal more . . . according as the Batty [or *batta*: premium] goes on Sicca Rupees'.[83] The instability in the relative price of gold and silver, to which this particular example refers, must be treated as the crucial factor regulating the bimetallic flows into and out of India.

As silver was generally the official standard of currency in India, South East Asia, and China, the Company's treasure was usually sent in either silver bars or foreign coins.[84] However, between 1660 and 1690 a substantial proportion of the treasure was in the form of gold (see Table A. 7). After 1715 gold completely disappears from the ships' invoices, and in fact the flow is reversed. It was now imported into Europe from the Far East. What was the cause of this curious development ? The obvious explanation seems to be that the Company had shifted its main trade interests to the southern coast of India where gold and not silver was the standard. And the rising importance of Bengal, a silver-con-

Table A. 7. *The quantity of silver and gold exported by the Company 1660—ij6o*

	Pure silver kg	Pure gold kg
1660-65	40145	1074.47
1666-70	22910	1673.66
1671-75	49828	3669.50
1676-80	179252	5156.62
1681-85	240952	6931.61
1686-90	30567	879.18
1691-95	7687	221.14
1696-1700	131511	491.22
1701-05	166885	—
1706-10	173833	141.11
1711-15	167503	H5-79
1716-20	250851	—
1721-25	289349	—
1726-30	261401	—
1731-35	260102	—
1736-40	260378	—
1741-45	257882	—
1746-50	366289	—
1751-55	398041	—
1756-60	193458	—

Sources. India Office Records, East India Company, Commerce Journals and General Ledgers, L/AG/1/6/ vols. 1-8, L/AG/i/i/vols. 2-14.
Note. The standard ounce of silver and gold containing 11/12 part of pure metal is converted into kilograms at the rate of 28.7675 grams of pure silver or gold. See also Appendix 1.

suming region, in the 1680s seems to account for the reversion to silver. But there were also other and more substantial reasons why the gold shipments were suddenly terminated and followed by silver. The true explanation lies in the relative ratios between these precious metals in Asia. In the 1660s there were increasing signs that silver was depreciating in India from the traditional ratio of 1:11. The actual ratios for India for the years for which we have references have been given in Table A.4. If these figures are calculated as a percentage of the official mint ratio in England and compared to a similar index of the market price of silver or gold in London, it provides us with some indication of the relative value of the two precious metals in Europe and in India. In 1661, for example, the ratio in Madras was reported by the Company's servants to have been 1:16.16 or 107.2 per cent of the mint ratio in England. At this level silver was cheaper in India than even in Spain where the gold escudo was officially rated at 15 reales and the bimetallic ratio was 1:1545.[85] The going rates in India, according to the factors, were

far lower than those at the time of Captain Hunter who had lived on the Coromandel coast as the Company's agent in 1633.[86]

The lowest point for silver in India during this period seems to have been reached in 1674-5 when the ratio rose to 1:17.22 or 14.2 per cent above the mint ratio in England, a fall in price that was attributed to the temporary closure of the royal mint at Golconda in that year. The rate at which the factors sold their reales (in terms of gold pagodas) aroused the severe displeasure of the Court of Committees and the reprimand that followed caused the Madras Council to retort, 'The pieces of eight were sold for the most that the Agent and Council could procure for them here . . . The fine argument of the Rials 8000 sold better at Mechlapatam in October 1673 is a little unmercantile, as if the prices of things were always at a stay.[587] If as a result of a higher bimetallic ratio in India, it was more or equally profitable to export gold, then it is legitimate to ask why silver was sent at all, particularly when it was easier to transport gold because of its relatively smaller bulk. The evidence in the records does not permit us to draw a clear answer to the question. It may have been because of the supply position of the two metals in Europe, silver still being the main medium of trade. The reason for the decline in silver price in terms of gold which took place in India is also speculative. It is possible that in the 1650s and 1660s large amounts of silver were reaching the Mughal Empire through the Red Sea and the Persian Gulf.[88] The official price of silver in Persia was lower than in India which gave rise to a considerable smuggling trade, and in order to prevent the leakage of currency the shah of Persia prohibited the export of money in 1670 with the exception of the Dutch, French, and the English at Gombroon.[89] The demand for money in India itself may have lagged behind the inflow of silver, and it is significant that in the 1660s gold was being imported into Surat not only by the Europeans but also by Indian merchants who smuggled it past the Customs House often using the Company's ship captains as couriers.[90]

By 1677 the downward drift of silver price was over in India. For some reason which still remains obscure, the silver price of gold suddenly broke in the Indian bullion markets in 1676. The Mughal gold coins which had previously been worth Rs 15 could not be exchanged for more than Rs 11-12. The price of gold had not been known to be so low in living memory, and the English factors, on the strength of rumours current in the bazaar, attributed the depreciation of gold to the sudden dispersion of the ancestral gold hoards by Emperor Aurangzeb, who needed large sums of money to finance his costly campaigns in Afghanistan and western India.[91] No satisfactory explanation has been put forward for the dramatic fall in the price of gold, but it is feasible, theoretically, to suggest the mechanism that could have brought it about. It is important to remember that the higher bimetallic ratio in India pre-

vious to 1676 was drawing gold to the subcontinent from the neighbouring countries. In 1682 Thomas Rolt even ascribed its low price to the 'great quantities yearly imported from Judda, Mocha, Persia, and Bussora'.[92] As the gold muhrs were mainly used by the wealthier classes to invest their savings, a large stock must have been accumulating during these years. At the same time its higher value in terms of silver made it profitable to make payments in gold. Tavernier expressly mentions an incident in Bengal when Shaista Khan, the governor of the province, paid him in gold muhrs at the rate of Rs 14! when the commercial rate was Rs. 14.[93] The situation was not unlike that in Spain where all large payments were made in gold. While the Indian merchants and Mughal ruling princes were increasing their liquidity in the form of hoarded gold coins, in 1674-5 the money markets in India witnessed a severe stringency. According to the Surat Factory the whole of India suffered from a scarcity of money, the root cause of which Aungier thought was a general impoverishment brought about by wars and ill-government. But three months earlier a more specific reason had been suggested. 'The *Falcon's* gold we disposed of,' the factory wrote in January 1675, 'At Rs 14! the tola, but could not raise the *Mary's* to so much by -A- of a rupee, by reason of the great scarcity of rupees. The Town of Surat being gleaned by the Mocha Jounks loosing their voyage this year, and the great quantitys the Dutch now carry out for Bengalla, being 600,000 which they have been forced to send for from Ahmadavad, Brampore, Surat not supplying them with the halfe. Nor hath there any moneys been brought into the Mint from Bussorah or Persia this monsoone so that we have great difficulties to find moneys to pay the Exchanges that are still drawne on us from the Inland Factorys.'[94] It is highly probable that the financial crisis of 1675 caused the imperial and the provincial treasuries to release their accumulated gold stocks, bringing about the fall in price observed by the Company's servants in 1676.

The losses suffered on gold sales predictably enough led to the request made by the Surat Factory that it should not be sent to western India.[95] In March 1681 the Committee of Treasure wrote a memorandum in which it was observed, 'In the General Letters from Surat of the 18th November and 22nd January 1679/80 they advise of the Company's exceeding great loss upon that year's gold (though they sold it for J more than the French and for less time) . . . when that gold was sent out Anno 1678/79 we could not foresee nor imagine so great a detriment thereon, though we knew it had abated of its former value considerably in those parts, which being as we also know occasioned by an accident, we thought it might not influence so long as it seemed it hath done, but the chief reason we sent so much gold was because we could not procure silver in bars or rials but at most exorbitant rates.'[96] Though the Committee spoke of the depreciation of gold as being the result of an 'acci-

dent', time was to show that the lower ratio had come to stay. Silver now became highly profitable in India. The Committee of Treasure noted with great satisfaction that in 1680 the Fort St George Council had sold reales at the most advantageous rate of 15! reales per 10 pagodas, whereas previously the rates varied between 18 and 20 reales.[97] In 1682 the Madras ratio of gold to silver was 1:14.46 or about 16 reales per 10 pagodas, and the market seemed to have settled down at around these rates until the beginning of the great silver crisis from 1709. There was a temporary shortage in 1693-4 in Madras which was relieved by the arrival of a considerable quantity of Spanish silver from Manila and 'a failure in the usual vend for Bengal and China'.[98] The reference to the imports from Manila indicates that the price of silver in India was influenced not only by the flow through the Middle East but also by the volume of trade along the eastern route through the Pacific.

In 1712 the Madras Council found itself unable to 'drive the trade to China, Malacca, Achin, and Quedah', where they had previously had a considerable trade, because the Manila ships failed to bring any silver to Madras.[99] By 1715 the dollar rate of gold pagoda had fallen to the point where the bimetallic ratio was only 1:13.40 or 11.2 per cent below the par in England, and the downward movement continued until 1723. The scarcity of silver in 1715 was attributed to the interruption of the supplies from Manila, 'the trade between that place and New Spain being entirely at a stand'.[100] The Council warned the Company, 'Though your Honours are considerably gainers, the scarcity and dearness of silver is a great discouragement to the trade of Bengal and China, which are the most valuable Articles in your sea customs and coinage'.[101] A similar shortage was experienced once again in 1727 when the Fort St George Council described the coast of Coromandel as being bare of silver for want of supplies from Manila.[102] The increase in the volume of European private trade to China and Bengal during the first half of the eighteenth century added a new element to the purely local Indian demand for silver. Whenever supplies ran short, the price was likely to rise steeply because the China traders could not do without silver. But in the 1720s French imports at Pondicherry were beginning to reach substantial proportions, and the English traders of Madras often had to go to the French settlement to make up their full consignment of silver. For the remaining years of our century its price in southern India continued to be governed by the excess demand or supply created on the one hand by the volume of trade with the Philippines and the Red Sea and on the other by the commercial requirements of Bengal and China, but it never fell to the level of the previous century. When the price reached the rate of 15 dollars per 10 pagodas, as it did in 1741, silver was considered to be cheap.[103] By the same token gold be-

came relatively more expensive and it could be a profitable import from China where its price was lower than in India.

Gold was certainly an important item in the Company's own trade with China. The inflow of silver into India from the Middle East and the Philippines and its re-export to the Far East, where it was exchanged for both commodities and gold, were perhaps a perfect example of the bimetallic flows in world trade during this period. These movements were well known to the contemporary businessmen and economists. Sir Isaac Newton noted in his Minute on gold and silver coins in 1717 that 'in China and Japan one pound weight of fine gold is worth but nine or ten pounds weight of fine silver, and in East Indies it may be worth twelve. And this low price of gold in proportion to silver carries away the silver from Europe'.[104] John Conduitt went even further and claimed that the much lower bimetallic ratio in the Far East caused gold to be imported to Europe from the East as well as from Brazil where new mines were being opened up.[105] Charles Lockyer, who made a detailed computation of the price of gold and silver in China, reckoned that at the corresponding London prices (5s 6d per oz for silver and £4. per oz for gold) a profit of 48 per cent could be made by importing gold from China.[106] Although in the 1670s the East India Company had shown itself interested in the China trade primarily because of the great advantage in terms of trade offered by the higher gold price of silver in China, nevertheless gold was seldom directly imported to England before the end of the century. In 1677 the Bantam Council planned to invest 20000 reales on buying gold in Taiwan. But the Court of Committees was anxious that gold purchased in Tongking, Taiwan, or Amoy should go to Madras or Surat where it was likely to be highly profitable, considering that the ratio in China was approximately 1:9 as against the Indian ratio of 1:14.[107] The reason for not importing the gold into Europe became clear a few years later. The duration of the voyage from Europe to China and back was too long to permit a substantial margin of profit. Even as late as 1698 the Court was writing to Bengal, 'You did well ... to keep back the China gold, whose produce will turn to better account in Bengal goods than if brought hither in specie.'[108]

But in 1701 the Company decided to import a certain quantity of Chinese gold for coining at the Tower mint, and a goldsmith experienced in making assays was sent out to assist the supercargoes.[109] During the next two decades gold was frequently brought back to London by the ships sent to China, and the supercargoes were allowed to invest their own capital on gold purchases.[110] The price of gold in China did not always remain steady. It rose and fell according to external demand. In 1730 at Canton the price was 10.5 *tales* of dollar silver (94 per cent fine) for 1 tale of gold (93 per cent fine), and at this rate the coining of

gold at the Madras mint could yield a profit of upwards of 30 per cent.[111] The Madras records contain many references to the private import and minting of both Sumatran and Chinese gold at the local mints.[112] The usual pattern of trade with the Far East was to tranship some of the silver imported either from Europe or Mexico via the galleon trade on the China-bound ships and exchange it for gold or commodities in China which were then imported back to India and the proceeds used to purchase return cargo for Europe. The conclusion to be drawn from such evidence of bimetallic movements in the international trade of Asia is that the current concept of India acting as an unlimited reservoir of silver in the structure of world trade may need drastic revision. The role of silver in the commercial life of India may appear on closer examination to have been fundamentally determined by the same type of considerations as elsewhere.

The Company's mints, currency, and the sale of precious metals

The Mughal imperial tradition looked upon the right to strike coins as an indispensable mark of political sovereignty. According to Khafi Khan, the historian of Aurangzeb's reign, one of the reasons for the emperor's displeasure with the English in 1693 was the fact that they had struck rupees in Bombay with the name of their own king.[113] The story seemed improbable because the European occupation of Bombay island, though resented by the Mughals, was in fact long acknowledged tacitly, and little objection had been previously raised against the Portuguese issuing coins bearing the name of their royal house. The mystery has been resolved by the recent discovery in an Indian museum of a few specimen coins issued by the Bombay mint in the fifth and sixth regnal years of William III and Mary. These coins are almost identical in shape, design, and weight to the emperor's own rupees. The inscription is in Persian and the coins could have been easily passed off as Mughal currency outside Bombay.[114] Clearly the possibility that coins bearing the names of foreign princes might circulate within the empire was one which Aurangzeb could not ignore. It was a breach of Mughal imperial tradition, and the East India Company was careful enough in future to issue rupees from its mints bearing only the name of the reigning emperor. Referring to the Mughal objections, the Company remarked in 1697, 'If the Mogol and his Umbra's continue to be exasperated at your coyning rupees with Persian Characters and the coyning them with other Characters will not make them less current, do you forbear the first, but if the other characters will hinder their currency, would have you manage the matter and keep as fair with him and them as you can, hoping that in time their resentment will slacken.'[115] Mughal strictness on currency matters effectively ruled out the possi-

bility that the imported Spanish coins might acquire a limited trade currency and thus ease the problem of maintaining an adequate supply of money. The practice followed by the shroffs of demanding a discount on rupees other than the current year's mintage, known as the *sicca* rupees, ensured that the Mughal coins were continuously re-struck, keeping the mints busy and providing a profitable source of revenue for the government. In this situation the East India Company had a choice of three ways in which it could turn its precious metals into purchasing power. The Company could sell the treasure to Indian bullion dealers, go directly to the imperial mints, or attempt to make payments in rupees which were issued from its own mints in Bombay and Madras. All three methods were tried out singly or simultaneously during our period, and the choice between them was determined by the least cost at which the foreign coins and bullion could be converted into local currency.

The monetary problems created by the circulation of predominently metallic coins could have been made much easier for the merchants to handle had India possessed a uniform currency system.[116] But in spite of the Mughal claim to exclusiveness, there were large and important trading areas in the subcontinent, particularly in the south, which had their own currencies. The gold coins of the independent kings of Golconda and the petty rulers of Malabar were such examples. As the authority of the central government declined in the eighteenth century, provincial governors began to issue coins in their own names. Even the imperial issues from the different mints did not pass at the same value. Writing on the chaotic currency practices of the time, the Bengal servants commented in 1712, 'The siccas of all other mints though belonging to the King don't go at the same batta as those coined in Bengal, the Surat pass but at 10 per cent batta, the siccas of Dacca, Patna, and Cuttack though of same weight and fineness with those at Muxadavad go at 2 or 3 per cent less at Hughly and the same in other places where not coined, each place takes the King's revenues in the coin of that mint to encourage it.'[117] For a trading organisation that was constantly transhipping money and goods from one part of India to another and was in the position of having to make very large disbursements in local currencies the multiplicity of rupees and other coins had very serious implications. Unless a procedure for standardisation was found, its accounts and trade were likely to be in a permanent state of confusion.

The easiest course for the Company was to dispose of its gold and silver to the local bankers and thus avoid the delay and uncertainties involved in coining directly at the Mughal mints. This was a point that was particularly emphasised in the long and complicated contract of 1679, concluded with the Kasimbazar financier Chaturmal Shah for the sale of the Company's treasure. At the consultation held before it was signed, Streynsham Master and his fellow members of the Council

specifically referred to the inconveniency suffered by the Company through the long delays in converting its silver and gold into current money of the country. To remove these obstacles it was 'thought good to make a firme and lasting contract with some responsible person to take off the whole quantity yearely, so that as soone as it arrives there may be nothing to do more then to deliver it and to receive the money as it comes from the Mint'.[118] The price of the reales was fixed at Rs 210 siccas per 100 Spanish dollars weighing the equivalent of Rs 240 siccas (for the actual standards see Table A.8). If payment was made in non-sicca rupees the discount was to be fixed at the current rates. The main interesting point about the contract was a clause which linked the price of gold pistoles to the market price of gold muhrs, Rs 13 per piece or Rs 13 2 *annas* (as) per *tola*. Whenever the rupee price of muhrs rose above this rate, the price of pistoles was to rise accordingly. The clause was inserted as a precautionary move against the prevailing instability of gold prices in India.[119]

The method of fixing a conversion rate between the reales and the Mughal rupees, as exemplified in the above contract, had become a standard practice in the Company's Indian factories by the 1670s. In Surat the practice was very similar, and the treasure was generally sold in bulk to a group of dealers known as *tankshal* shroffs.[120] These men specialised in buying bullion or foreign coins from the public and converting them into sicca rupees at the local mints, and their close connection with the mint-masters enabled them to fix a system of priorities and minimise both the delay and charges of coinage. But in Surat the price of reales was higher than in Bengal. Whereas the Bengal rates varied in the 1670s between 205-210 rupees per 100 dollars, in Gujarat they were 211—214, a difference that is accounted for by the higher interest rate and mint charges prevailing in Bengal.[121] From contemporary accounts we are also left with the impression that the Surat money market had reached a greater degree of sophistication than that of Kasimbazar and that the trade of western India generated a higher volume of loanable capital in Surat. In selling the Company's precious metals the only complaint voiced by the Surat Factory related to the monopoly power exercised by the tankshal shroffs.[122] In Bengal at a time of active trading the money market was often so tight that not enough purchasers could be found who had a sufficient amount of coined rupees to invest on non-monetary gold and silver. The most important factor influencing the Kasimbazar money market was the exchange rate of Agra. Whenever the demand for bills on Bengal rose in Agra, because of either increased orders for Bengal goods or their better sales in the north Indian markets, it depressed the exchange rates, making it profitable for bankers in Bengal to advance liquid funds against these bills.[123] On such occasions the Company's servants had no

Table A.8. ***Weight and standard of Spanish coins, Indian pagodas, and rupees***

Year assayed	Coin	Metal	Issued by	Mint	Weight Troy oz	Weight gram	Fineness standard oz (92.5%)	Pure metal gram	Fineness %
1670	Pagoda	Gold	Madras	Madras	**0.11025**	342885	**0.10280**	2.95738	86.25
1678	Reales of 8	Silver	Charles II	Seville	0.87083	27.08346	0.89516	25.75204	95.0843
1681	Rupee	Silver	Shahjahan	Surat	0.37500	11.66274	0.39188	11.27348	96.6624
1681	Rupee	Silver	Aurangzeb	Surat	O.354I7	**11.01482**	0.37792	10.87194	98.7029
1681	Rupee	Silver	Aurangzeb	Bengal	0.37292	II.59796	—	—	—
1681	Rupee	Silver	Bombay	Bombay	0.37292	II.59796	—	—	—
1711	Rupee	Silver	Madras	Madras	0.37292	n.59796	0.39728	11.42883	98.5417
1711	Rupee	Silver	Theoretical	Bengal	0.37500	11.66274	0.40034	11.51697	98.7500
1738	Reales of 8	Silver	Philip V 1725	Mexico City	**0.89021**	27.68604	0.88219	25.37888	91.6667
1738	Reales of 8	Silver	Philip V 1727	Mexico City	**0.89021**	27.68604	0.87818	25-26351	**91.2500**
1738	Pillar dollar	Silver	Philip V 1728	Mexico City	**0.89021**	27.68604	**0.89021**	25-60959	**92.5000**
1738	Pillar dollar	Silver	Philip V 1729	Mexico City	**0.89021**	27.68604	**0.89221**	25.66726	92.7083

Sources. East India Company, Despatch Book, vol. 87, pp. 390-2, vol. 88, p. 541, vol. 89, p. 320, vol. 97, P. 125, p. 786, vol. 107, p. 402-3, Factory Records Surat: Diary, vol. 26, p. 135.

Note. 1 Troy oz = 31.10 gram, 12 Troy oz = 1 lb.

option but to send up their treasure to the royal mint at Rajamahal.[124]

If direct coinage had been free of hazard, there is little doubt that the Company would have preferred to coin its treasure at the Mughal mints. According to some calculations carried out by the Committee of Treasure in 1686 100 Spanish reales weighing approximately 86 oz 17 dwt 12 gr (2702 gram) produced at the Surat mint Rs 219 out of which the shroffs charged 3 J per cent mintage, 2 per cent for variations in weight or fineness, and 60-90 days' discount for the period of coinage. But in Bengal the same number of reales did not yield more than Rs 213 4 as gross at the mint, and in spite of the contract made with Chaturmal Shah the average rate at which the accounts were credited after deducting all charges was only Rs 205 4 as. The Committee expressed surprise at the continuing difference in the market price between Surat and Bengal, and as usual openly hinted at corrupt practices among the Bengal servants.[125] Although the mints would have given a better return, the Company was uneasy at the thought of providing the Mughal officials with a political leverage by entrusting large parts of its working asset within their power. With the appointment of Murshid Kuli Khan as the dewan of Bengal in the early years of the eighteenth century, these fears became particularly acute, as the Company's diplomatic relations with the new minister was far from cordial. The Calcutta Council was instructed in 1708 to sell the treasure at a loss rather than send it to the new mint at Murshidabad.[126]

Some of these difficulties could have been avoided if the Company's own rupees struck in Madras and Bombay could be made current in its investment areas. The Company's original land grant at Madras gave it the right to strike coins at the settlement, and a mint had been established under the supervision of Indian mint-masters. During the second half of the seventeenth century the output of the mint was mainly in the form of gold pagodas. In 1685 the Court of Committees asked the Fort St George Council to explore the possibility of approaching the Golconda rulers for permission to make payments in their territories in silver rupees coined at Madras, just as the gold pagodas were allowed to circulate, though without a proper farman the experiment was not to be attempted.[127] The Madras mint appears to have struck some silver rupees shortly afterwards. But the overthrow of the Qutb Shahi dynasty of Golconda by the Mughals in 1687 an^ the Company's own deteriorating relations with the latter induced Governor Elihu Yale to postpone the coining of rupees in 1688. At the same time the need for pacifying the newly conquered territories and maintaining the prosperity of the area gave the Mughals a strong reason for favouring the European trading companies, and in 1692 after the English had made their peace with the emperor, Prince Kam Baksh, the latter's son and representative in southern India, issued a *nishan* whereby the Company was allowed to

coin rupees in the name of the emperor. Six iron dies of the standard Mughal design were sent down to Madras, two for gold muhrs, two for pagodas, and two for rupees.[128]

At first some difficulties were experienced in coining rupees because of a scarcity of silver and the unfamiliarity of the Madras mint-masters in refining the metal. As a solution to the problem it was suggested that the Company's silver should be sent already alloyed to the rupee standard of fineness and cut into blank pieces ready for stamping. But Fort St George took care to point out that there was some risk in doing so. For all Mughal rupees were hammered pieces and the marks generally showed at the edges. If the blanks were cut on a machine in England and the coins looked smooth-edged, they could be distinguished from the ordinary Mughal issues. It was debatable whether the country shroffs would accept the innovation. They could easily take advantage of the distinction to reduce or obstruct the currency of the Madras rupees.[129] During the next century an enormous number of rupees coined at the Madras mint found their way to Bengal, where they were accepted at a discount of 3 per cent, though the intrinsic difference between them and the sicca rupees of Murshidabad or Rajamahal was only 0.56 per cent.[130] By coining rupees at Madras and paying part of the Bengal purchases with them, the Company already stood to gain considerably, as it was pointed out in 1711, 'That we save the duties of the Mints at Rajamaul or Cassimbuzur which is much larger, at least used to be so there[,] than it is at Madras. We run no hazard of having our bullion seized on or stopped by the troubles in the country nor are forced to stay the Moors leisure for coinage which used to be very dilatory in former times'.[131] The next logical step in the Company's financial policy was to obtain a farman from Delhi that would make the Madras rupees legal tender in the Mughal Empire and put them on a par with the siccas. But it was here that the Company unexpectedly ran into an irremovable opposition from the local rulers and bankers.

The commercial privileges obtained by the Company in 1717 from the Emperor Farrukhsiyar included, among other things, the right to make payments in Bombay or Madras rupees at Surat or in Bengal without having to pay any discounts, provided the Company's rupees were of the same standard as those of the Surat mint. The farman was also accompanied by a separate *husb-ul-hukum* under the seal of the emperor's vazir giving the English access to the imperial mints at Rajamahal, Murshidabad, and Dacca on payment of the customary mint charges.[132] These were far-reaching concessions, which, if implemented, would have solved once for all the Company's monetary problems. In the context of the Bengal politics of the time, they remained mere formalities without substance, for Nawab Murshid Kuli Khan, the subadar, and his successors, aided by the great north Indian banker Fateh-

chand, the Jagat Sheth, resolutely opposed all attempts of the Calcutta Council to coin their silver at the royal mints or even to pass off Madras rupees without the batta. Under the nawab's patronage the Jagat Sheth had become banker to the government. His 'estate' was considered as the king's treasure, and gradually he established an iron monopoly in the coinage and bullion trade of Bengal.[133] Tuttichund having the entire use of the mint,' recorded the Bengal Public Consultation of 9 November 1721, [c]no other shroffs dare buy an ounce of silver and he will give no more than the forementioned price.'[134] The shroffs of Kasimbazar were also 'the Nabob's creatures' and refused to accept Madras rupees on an equality with the siccas.[135] The Company put its finger on the real problem when the Directors reasoned that if a formal complaint was made to the emperor in Delhi the subadar would have no difficulty in proving the loss to the government revenue by granting the Company free access to the mint. For Murshid Kuli Khan knew perfectly well that if the Company's merchants were paid in foreign silver they could not turn it into money until it was coined.[136]

It was amply clear that the alliance between the Jagat Sheth and the nawab of Bengal stemmed from the mutual advantage they gained from the maintenance of a quasi-monopoly of currency, but the Company on its part appears to have insisted on coining its silver without paying the 5 per cent mintage charged to native merchants.[137] The result was a continuation of the deadlock. In September 1731 Nawab Shuja Khan received a representation that the English were importing only Madras and Arcot rupees into Bengal and had brought no bullion or foreign coins. It was swiftly followed by an order that the Company's rupees should be treated as bullion. The allegation was in fact false and it was being used as an instrument of pressure by the Jagat Sheth, who was a large creditor of the Company's bankrupt broker Cantoo. At the Murshidabad mint 50000 Madras rupees were actually put into the melting furnace.[138] Another diplomatic incident occurred in 1737 when Dewan Alamchand sent for the English vakil and complained that the English were importing much less bullion than during the time of Murshid Kuli Khan and that a greater proportion of the treasure was being sent away to Patna. The only way that Fort William Council could set the government's fears at rest was by submitting detailed figures of the quantities of bullion brought in during the previous five years.[139] At the root of the Company's inability to secure a privileged position in the monetary system of Bengal was its political weakness in the region. The mint in Bombay, on the other hand, had a much greater degree of success, and it was extensively used by the Indian merchants importing treasure from the Red Sea. In the late 1720s the average amount of rupees privately coined at the Bombay mint exceeded annually Rs 650000.[140] The Company itself, however, was able to utilise both the

Surat mint and that of Bombay, and in 1736 it was calculated that treasure coined in Surat gave a better return than the mint of Bombay, because the Indian mint-farmers had apparently raised their charges at the island.[141]

The East India Company's efforts to integrate its import of treasure into the Indian monetary system went through several distinct historical stages. Between 1660 and 1680 most of the bullion and specie, both gold and silver, was sold to the private dealers in precious metals at the going market prices. The mints in Madras and Bombay were mainly used for coining money meant to circulate within the two settlements. From the early 1680s to the period of Farrukhsiyar's farman of 1717 a dual system was followed. The treasure was sold to the merchants when the prices were favourable; otherwise some of it was coined into rupees or pagodas at the Company's mints in Madras and Bombay. With the gradual emergence of Madras as a major trading centre in south India, its coins also gained a wider currency and popularity. In the 1720s the Company was still selling its treasure to the private merchants in Bengal. From the next decade, however, the greater proportion of the bullion and specie were coined either in Bombay or in Madras and when necessary tran-shipped to Bengal. Compared with other aspects of the Company's trade in the subcontinent, such as the purchase of the export goods, the disposal of the treasure was effected with remarkable smoothness and regularity. Even the early complaints of the delays and obstructions at the local mints quickly died down as the servants established workable relations with the Indian shroffs and bankers. The latter's skill in dealing with money and currency contributed in no small way to the efficient running of the Company's financial business in India. But as the Mughal monetary system deteriorated in the eighteenth century, the East India Company found it both politically feasible and commercially more profitable to use its own mints in Bombay and Madras.

9
THE STRUCTURE OF COUNTRY TRADE IN ASIA

The general features of Asian trade: geographical areas and commercial characteristics

The European discovery of the commercial world of Asia in the sixteenth and seventeenth centuries not only revealed the potentials of the direct trade with Europe but also brought to light the existence of a widespread seaborne traffic in merchandise and men between its various ports and geographical regions. No account of the early European traveller in Asia was complete without a description of the commodities, merchants, and trade routes of the most important commercial centres to be found around the Indian Ocean. One of the earliest examples of such writings is the *Suma Oriental* by Tomé Pires, the Portuguese apothecary, who went out to India in 1511 and later visited Malacca and China.[1] In the preface to his book, which was dedicated to the king of Portugal, Pires announced that in the *Suma* he would speak not only of the Asian kingdom and regions but also of the dealings and trade they have with one another, without which they could not exist. For it was trade in general which ennobled kingdoms and cities and made their people great and also brought war and peace. So great was the desire for perfection among these early writers that many of them were led into eloquent description of places they had never visited and seen, because to leave them out would have been to make their accounts of Asia incomplete. Pires himself probably never travelled to the west of the coast of Malabar. Yet his account of Aden, its fortress and trade, has all the evocative quality of the experience of an eye-witness. Two centuries later the caustic wit of the Scottish sea captain, Alexander Hamilton, who knew every major trading port in the Indies, caused him to state that some of the contemporaneous Asian travels were performed only on maps and their accounts embellished with knowledge derived from second and third hands.[2] But the obvious weight and importance attached by individual travellers to the inter-port trade of Asia was equalled by the numerous reports written on it by the officials of the Dutch and English East India Companies. Even the French Company, the second Compagnie des Indes, which was late in gaining a substantial entry into the Asian trade found the country trade a topic of absorb-

ing interest, and the memorandum written by one of its officials, Vincens, in 1733 remains as one of the most detailed and systematic sources of information on the maritime trade of the Indian Ocean in the 1730s.[3]

The reason for the interest taken by the European Companies in the country trade is not difficult to see. The commercial methods adopted by them in purchasing the return cargo for the homeward-bound ships closely depended on the pattern of foreign trade carried on between the different economic regions of the Indies. The textile investments of the Indian merchants in Gujarat were begun in September and continued until the end of the year, though the ships actually departed for the Red Sea ports in January. This was a season best avoided, and it was not unusual for the cloth contractors who did business with the companies to postpone decisions till they knew the volume of demand for the Red Sea trade.[4] If the country ships returning from Mokha or Basra missed their voyage or were lost at sea, it could cause an acute financial crisis in Surat. The result could well be that the trading companies would suddenly find themselves unable to raise funds in the local money market, which was essential for completing their own European investments.[5] These hazards of the wind and water, that were such a perennial feature of pre-modern trade, made it all the more imperative to gather information. The private correspondence of the East India Company's officials, some of whom were country traders on a large scale, are full of very detailed messages on the number and timing of the local shipping and the effect of their arrival and departure on markets and prices. But in the early years of their trade the Dutch and English Companies also hoped that the local Asian commerce would provide them with opportunities for supplementing the profits of the direct trade and reduce the politically sensitive dependence on the export of bullion. Even after the English Company had practically relinquished its share of the Indian inter-port trade in favour of the servants resident in Asia, the carrying of freight goods in the Company's ships still provided a profitable way of minimising total transport costs. As for the news of purely indigenous trade, the regulations contained a standing rule for sending home translated copies of the shipping registers, kept in Persian by the Mughal port officials, which it was hoped would reveal both the volume and direction of local trade.[6]

From these European reports it is possible to reconstruct a fairly comprehensive picture of the nature and structure of Asia's seaborne trade from the sixteenth to the eighteenth century. The main area of uncertainty lies in estimating the true volume and value of trade in a consecutive series. The Dutch copies of the Persian customs registers kept by the Mughal officials in Surat and Hugli, apart from specifying the names, owners, and the port of origin of the ships, also indicate their cargo, though unfortunately the quantities are given in packs and

bales and not in standard measures. If it is difficult to treat the Asian trade with the same quantitative rigour as the Companies' direct trade with Europe, at least we know a great deal about the different commercial regions and the pattern of commodity flows. From the time that the Portuguese first appeared in the Indies down to the end of the eighteenth century, there were four distinctly separate trading areas in Asia. These were the countries around the Red Sea and the Persian Gulf, the subcontinent of India, the South East Asian islands and the mainland, and finally, the Far Eastern countries. To these we can add certain ports in east Africa, although African trade with the Middle East and India appears to have been at once more specialised and limited in volume. While the main distinguishing feature of these areas is the linguistic and ethnic composition of their people, they are also differentiated in terms of trading characteristics. Coastal or internal trade is more important for certain regions than it is for others. Some areas because of their locational and transport advantages found it profitable to concentrate heavily in some particular branches of inter-regional trade. The commerce between the Middle East and the western coast of India can be cited as an obvious example. The economic exchanges which these two areas carried on with other Asian centres of trade were not unimportant. But for merchants of Surat, Sind, or Malabar the Red Sea and the Persian Gulf were areas of rich as well as staple trading, with ample opportunities for a regular and speedy turnover of capital. In contrast the voyages undertaken by the Arab or Gujarati traders to distant markets in South East Asia or China not only lasted over a much longer period of time with a corresponding pressure on profit margins but also had a stronger element of speculative ventures. In this respect the nature of commodities which could be profitably carried from one market to another played a large part in determining the pattern of regional specialisation. With the given technology of shipping, a combination of wooden hulls and sails, the most crucial economic consideration in pre-modern trade was the balance between low-value bulk goods and the low-volume rich cargo. To maintain ships under sail with non-tradeable ballast was extremely wasteful, and if they were laden solely with rich commodities the financial loss in the case of shipwreck would have been catastrophic for most owners. The point was emphasised with some force by the Court of Directors in a letter to Bombay: 'It is clearly our interest to encourage the import of Bullion from Mocha to Bombay and as plain that merchants will always divide their risk whenever it is in their power, and if there is but one Bottom to freight upon, it follows that silver intended for Bombay may frequently be carried to Surat.'[7] Because of the transport constraints the commodity composition of world trade before the age of industrial demand and the steam ships tended to be less sharply

divided into distinct generic categories. It is certainly possible to classify the Asian commercial goods in the seventeenth and eighteenth centuries according to the familiar divisions of manufactured products, raw materials, and foodstuffs. But conceptually these distinctions are not very relevant to a proper understanding of the methods of production and the pattern of consumption. For the purpose of creating and accumulating wealth through trade, of far greater importance was the question whether a particular area possessed the natural endowments and the human skills to create an exportable surplus over and above its own internal needs and whether that surplus took the form of goods which satisfied the consumer tastes of other communities and societies.

These necessary conditions for international economic exchanges were fulfilled in varying degrees in different countries of Asia. The subcontinent of India through its geographical, climatic, and ethnic diversity was perhaps the most versatile trading nation of the time, but the position of the Middle East as the half-way house between Europe and Asia's real surplus areas was an extremely important one. The consumption needs of its people and the high degree of civilisation reached acted to create real wealth in regions that had a commercial surplus, and the Middle East was one of the major sources of that most tangible form of wealth, gold and silver. The overwhelming impression which Islam had once made on the European sense of identity and the continuing strength of the Ottoman Empire served as a perpetual reminder to Western travellers and merchants in the Indies from the sixteenth century onward of the precarious but rich economic prizes that could be made in the Middle East. It was customary for most of the contemporaneous travel accounts to begin with a description of the trade routes and ports of the Red Sea, for it was one of the two main commercial arteries which connected the Mediterranean with the Indian Ocean, the other being the overland caravan route through Syria and Mesopotamia, followed by the sea voyage down the Persian Gulf. Both Pires and Barbosa agree that, at the beginning of the sixteenth century, Jedda and Aden were unrivalled as the principal centres of trade in the Red Sea.[8] As a port of embarkation for pilgrims who had been on *haj* to Mecca, Jedda of course was a perfect locus for consumer spending and its annual fair held during the height of the pilgrim traffic provided a substantial outlet for cotton textiles imported from India. In addition it was an entrepot for the transit trade of the Red Sea. Even in the eighteenth century, Carsten Niebuhr noted that ships from India were not allowed by the Turkish authorities to unload anywhere except at Jedda, just as the traders from Suez seldom proceeded beyond this port.[9]

As a garrison town and a natural port of call, Aden shared many of the advantages of Jedda. The failure of the Portuguese to capture the stronghold ensured that the naval control of the Red Sea would not pass

completely into European hands. But the eventual decline of Aden as a trading port resulted from the rise of the emirate of the Yemen and the commercial importance of coffee as a trading product of the region. In the seventeenth century Mokha rapidly outgrew its role as a port of shipment for coffee and became a centre for the transit trade from India as well. Further east the advent of the Portuguese on the western coast of India and their hostile attitude towards the Muslim traders of Malabar and Konkan had important repercussions on the maritime routes used by Asian shipping in the Middle Eastern trade.[10] The trade of Gujarat, important as it was, became much more so and the Malabar coast declined in significance. By the time that the north European traders had appeared in western India, Surat had become the commercial metropolis of the area and supplanted Cambay. In Hamilton's descriptions Cambay's products and manufactures appear as inferior to those of few towns in India and he considered its local trade as contributing in no small measure to the wealth and grandeur of Surat. Long before Hamilton's time, Cambay had become an economic satellite of its southern neighbour;[11] it was not until the end of the eighteenth century that Surat itself was to lose its trading pre-eminence to Bombay.

In contemporaneous European sources, the position of Surat as the premier commercial and financial centre in the Mughal Empire is never challenged. The author of a memorandum on country trade writes from Fort St George in 1695, 'Surat, the most ancient Presidency and Emporium of the Northern parts of India, is a City extraordinary well situated for Trade, not improperly termed the Mogull's Chamber, and sea-port to Agra, Lahor, Brampore, Ahmedabad, and other inland marts. It can both take off and furnish a cargo for any part in India whatsoever . . . The Moors drive a great trade from hence to Persia, Bussora, Aden, Mocha, and Judda where they dispose of those goods which from thence are carried throughout the Grand Segnior's Dominions.'[12] But like most cities of maritime trade, the prosperity of Surat was not a constant factor in time. The two most likely interruptions to trade were the occurrence of famines and the outbreak of wars. The great commercial depression of 1626 mentioned by Pelsaert was heightened a few years later by the grim famine of 1630-1, the effects of which lasted to the middle of the decade.[13] In 1644, however, the English merchants in Surat were reporting that the shipping owned by Indian traders had increased to the point where the freight rates were being severely cut. The upward trend in the construction of ships apparently continued, for by 1660 the total number of ships trading from Surat had multiplied to 80 from an approximate figure of 15-20 ten years previously.[14] It is important for the historian of the port to distinguish short-term movements from the long-term trends. The commercial depressions in Surat recorded by the officials of the European companies

seldom lasted beyond three or four years. At best their effects were felt no longer than a single trading season. The death of a strong local ruler whose kingdom lay across the internal trade routes might for a time undermine the merchants' confidence in the ability of the caravans to get through between north India and Surat.[15] As the arrival of the Agra caravans always stimulated business life in the city, uncertainties and delay over their movements were very likely to affect the sale of the European goods imported by the companies.[16]

The first serious sign of a permanent shift in the main direction of Surat's trade came with the fall of the Safavid dynasty and the ensuing civil wars in the Persian Empire. From 1723 reports begin to multiply of the rapid decline of Gombroon and other Persian ports in the Gulf, which caused part of the Indian trade to be diverted to Basra.[17] In 1727 the Bombay Council feared that a similar calamity might overtake the Mughal administration in India, leading to 'a total subversion of this Monarchy'.[18] On hearing such news and prognosis, the Court of Directors in London admitted with some inward doubts of the inevitable connection between the general decay of trade and political instability in India and Persia.[19] But in 1732 the Court was impelled to point out that in spite of the unsettled condition of the city of Surat and the surrounding land, a great number of ships were consigned to the port from all parts of the Indies with valuable merchandise year after year, which confirmed the Court's opinion that the city's trade was not much affected by local or imperial politics.[20] The eclipse of Surat from its position of overwhelming commercial superiority in western India during the eighteenth century was no doubt a gradual process. Even English shipowners, who were to emerge as the most dominant group in the carrying trade of the Indian Ocean, for a long time preferred to discharge their cargo at Surat rather than in the East India Company's settlement in Bombay. They were able to obtain speedier sales and better prices in Surat. Europe's view of its role as a commercial metropolis even in the middle of the eighteenth century was quite clear. In 1747 when the personal guards of the Surat governor caused a riot in town, the English Council pointed out to the authorities that a city like Surat which lived by trade could not afford such lawlessness. A year later the Council took note of the fact that if the English did take part in the local politics, it was 'to save from Ruin so great a City as Surat'.[21] Apart from internal political weakness which periodically paralysed the city's economic life, there were other factors also working against the long-term interest of Surat. The transit trade from northern India was always a vital lifeline to its prosperity. A document on the internal trade of the Mughal Empire dating from 1661 records that the cotton piece goods annually exported by the Armenian and Mughal merchants to Persia through Surat came from as far as Benares and Patna, and their

value was no less than a million rupees.[22] But in the second quarter of the eighteenth century, Maratha expansion in Gujarat and the north brought a renewal of military operations which adversely affected the caravan trade. The most notable victim was the great industrial city of Ahmedabad which, as the provincial capital, was the first objective of a military or political struggle. When the city fell to the combined forces of the Marathas and the imperial viceroy, Momin Khan, in 1737 after a long siege, John Lambton, the Chief of the English Factory in Surat, recorded in the official diary that the news of the capture of Ahmedabad 'gives great hopes to the merchants of this Place that it's trade will be revived and run in its wonted channel5.[23]

Surat5 s multilateral trading connections within the subcontinent of India and with countries outside were always a source of strength. In a way the phenomenon that needs an explanation is not the decline of the port. What is much more difficult to account for is its long supremacy lasting well over two centuries. During the first half of the eighteenth century the seaborne trade of Bengal was certainly much greater than that of Gujarat, and yet its chief indigenous port, Hugli, is seldom mentioned in contemporaneous sources as being comparable to Surat. In the absence of other satisfactory explanations, we are forced back to a sociological point of view which sees the commercial skill and acumen of the merchants of Gujarat, their concentration of capital, and intimate knowledge of the sea and shipping, as the main driving force behind Surafs ascendancy and the subsequent survival.[24] To carry conviction, this explanation must demonstrate that the Gujarati trader was just as active in the coastal trade of India, in the trade to South East Asia, to China and east Africa, as he was in the commerce with the Middle East. Such evidence is indeed easy to find. Both Pires and Barbosa unite in testifying the presence of Gujarati merchants in Bengal, Pegu, Malacca, Sumatra, and even China.[25] Pires estimated their number at Malacca, before the Portuguese conquest, at a thousand, which was swelled by a floating population of four to five thousand Gujarat seamen, and he describes the merchants of Cambay as better than Italians in the art of merchandising.[26] Later the Dutch registers of naval passes issued to Indian shipowners record many applications for voyages to the East Indies from Surat, to Malacca, Achin in northern Sumatra, Pegu, and Tenasserim, and in the coastal trade to Bengal shipping from Surat played an extremely important role.[27] For a brief period in the 1670s even the defunct trade to Bantam was actively revived under the encouragement of the sultan, whose interest in the commerce of his port was seen as a direct threat by the agents of the English East India Company to their own inter-port trade in the Indies.[28]

When the markets of one particular region suffered a contraction, the merchants of Surat could always turn to other lines of trade to mini-

mise the effects of the temporary depression. Reports of bad sales in the Red Sea ports in particular led to speculative voyages being fitted out for the Indonesian islands and China. But in regard to the eastward trade Surat was in a position of lesser advantage than the coast of Coromandel or Bengal. This difference was strongly underlined by the gradual decline of the spice trade through the Red Sea and the eastern Mediterranean, which cut away Gujarat's intermediate position between Malacca and Aden. The eastern coast of India on the other hand had traditionally strong commercial relations with the mainland and the islands of South East Asia.[29] In the early seventeenth century, as we learn from William Methwold's account of the kingdom of Golconda, the region between the Kistna and Godavari carried on a highly profitable trade with Achin, Pegu, Arakan, Ceylon and Mokha.[30] Competition from Madras and the Armenian settlement in St Thomé may have reduced the importance of Masulipatam later in the century, but there is no question that it continued to be a regular port of call for Indian shipping sailing to and from Bengal.[31] While the Portuguese writers of the sixteenth century have very little to say about the coast of Coromandel, they are more informative about the trade of Bengal. Their settlement at Hugli and its rapid rise to commercial pre-eminence, of course, placed Bengal in a position of some strategic importance in the Portuguese imperial system. At the time that Pires was writing, Bengal clearly possessed two separate branches of trade, one to Malacca and the other to the coast of Coromandel, Malabar, Gujarat and Ceylon. In the *Suma Oriental* the merchants of Bengal appear almost on an equal footing with those of Gujarat.[32]

It is possible that before the arrival of the Portuguese in the Indian Ocean the commercial expertise and the share of trade possessed by different trading communities in the coastal areas of India were more evenly balanced than at a later time. The Chetti merchants of Coromandel were renowned foreign traders in South East Asia and took a large part in the commerce of pre-Portuguese Malacca.[33] The extent to which the indigenous traders of Bengal and Coromandel suffered from European control of the strategic trade routes and commercial centres in the Indonesian archipelago is an open question. The V.O.C. may have been reluctant to issue safe-conduct passes to Indian shipping sailing from the eastern ports of India to the East Indies.[34] Until the end of the seventeenth century the three chief ports of Coromandel and Bengal - Masulipatam, Balasore and Hugli - still traded to Sumatra, Malaya, Siam and Burma, though few ships are recorded as having gone to Java.[35] After 1700 the Dutch copies of the Hugli and Balasore shipping registers reveal an increasingly smaller number of vessels making for the eastern destinations. By 1720 the Bengal merchants were left only with the coastal trade to south India, Ceylon, and the Maldive

islands, the Gujarat trade being entirely in the hands of Surat merchants. An explanation for this change must be sought, not as in the case of Surat with a possible decline of markets, but in the growth of European shipping and trade in Asia. For in the first half of the eighteenth century, English private traders built up a profitable business in carrying freight goods belonging to the Hugli merchants, an activity that was successfully adopted by the French later on. By shipping merchandise in vessels flying European colours, the Bengal traders avoided any embargo which the Dutch might have imposed. Although this measure prevented a total exclusion from certain markets, the necessary price paid by them was to see the English and the French increase their share of the eastern trade as well as the trade to the Persian Gulf, which had always been a substantial market for Bengal goods. The frequent reference to English ships trading from Calcutta or Madras with Sumatra, Manila, and China in the 1720s and 1730s leaves little room for doubt that the subcontinent's eastern trade did not undergo a fundamental or sustained contraction.[36]

Perhaps the area most seriously affected by early European trade and naval activities in Asia was South East Asia. The Portuguese conquest of Malacca did not entirely destroy its previous position as one of the greatest emporiums and entrepôt centres of Asian commerce. Before the discovery of the straits of Malacca, Indian shipping reached the Indonesian markets through the Sunda passage.[37] At the beginning of the sixteenth century, however, the southern route had partially fallen into disuse, and Malacca was the undisputed key to the long line of trans-oceanic trade stretching from the Far East to the isthmus of Suez in the Red Sea. Even towards the end of the century, when Dutch and English travel accounts begin to supplement the Portuguese sources on Malacca, a large part of the trade of the port seems to have been in the hands of non-Portuguese merchants.[38] With the commencement of the Dutch naval action against the Portuguese in the Indonesian waters the trade of Malacca naturally became precarious and its final capture by the V.O.C. in 1641 permanently relegated the northern route to a position of commercial insignificance. The disappearance of Malacca of course left a serious void that was partially filled by the rise of Achin and Bantam. After the Dutch had occupied Bantam in 1682, Achin was the only port left in the region which was open to Asian and independent European traders.[39] However, the Dutch policy of exclusion in the Indonesian archipelago contained one exception: it did not include the Chinese junks trading to Bantam and Batavia. Although under the direction of Coen the Batavia government had followed a policy of violence against the Chinese both in Bantam and on the coast of China, the depredations were later confined only to ships that had failed to take out Dutch safe-conduct passes, and the Chinese were given better treat-

ment than any other group of Asians in the political settlements of the V.O.C. in the East Indies.[40]

The discouragement which the Dutch met from the Chinese imperial authorities in obtaining permission to trade directly with China was made the main excuse for Batavia's hostile action against her merchants and shipping. It was claimed that the Dutch had as much right to prevent the Chinese from trading with other countries as they had in excluding Europeans from their country.[41] While this forceful reasoning illuminates certain aspects of Coen's commercial policy and economic thinking, it also draws attention to that strange development, the disappearance of the Chinese as major participants in the Indian Ocean trade.[42] The insular attitude adopted by the Chinese imperial government towards maritime affairs has been attributed partly to the activities of the Japanese pirates and partly to the preoccupations of a mainly land-based empire. Whatever the reason for the official indifference towards trade, the coastal areas of south China retained some commercial connections with the Philippines, Cochin China, Siam and Java. The trade with Manila, whether it was carried on by Chinese traders themselves or by the Portuguese from Macao, always remained important, and it was the only single port remaining in east Asia which brought together Spanish America, Imperial China, and Mughal India in a series of bilateral trading relations. A similar position was occupied by Tongking in Indo-China in the seventeenth century, with the exception that Tongking had trade with Japan as well as China. In an account of the Far Eastern trade written from Tongking in 1672, William Gyfford advised the Company of the very advantageous commerce that could be developed between Indo-China, Manila, Japan, and China.[43] Such advice completely overlooked the formidable political obstacles which stood in the way of integrating the confused commerce of the Far East into a logical system of economic exchanges on the pattern of the Indian Ocean. There was at least one strong reason for the continual pull which China exercised over foreign merchants, both Indian and European, in gravitating them towards her open ports. The Chinese Empire no less than the Mughal could not carry on its economic life without an external supply of silver, and the enormous productive capacity of China provided the means for obtaining it from the Spanish-American mines through foreign trade. Even Gyfford's account of 1672, when the Dutch and the English trade with China had barely begun on a regular basis, makes it clear that his plans for incorporating Manila, China, and Japan into the Company's commercial organisation in the Indonesian archipelago would depend for their success on an ample supply of silver.

Trade routes and shipping

The existence of substantial trading relations between various geographical regions of Asia must necessarily imply that there were well-known sea-routes which the merchants considered safe to navigate with the existing nautical technology. With sailing ships, ocean voyages could never be completely hazard-free, and in the medieval Arab sources there are descriptions of famous shipwrecks which occurred within sight of land.[44] Even large ships sailing along traditional routes were exposed to danger from sudden storms and human predators, though fortunately for Asian traders individual piracies were comparatively rare in the Indian Ocean.[45] Tavernier himself narrowly escaped shipwreck when he sailed from Gombroon to Masulipatam in 1652 on a large ship belonging to the king of Golconda.[46] The ship mentioned by him had left Persia on 11 of May and it reached Masulipatam on 2 July, apparently without calling at any intermediate port. However, it would have been more usual for most of the country ships sailing between the Persian Gulf and the coast of Coromandel to call at one of the Malabar ports. In the earlier centuries the importance of western India in the spice trade from the East Indies to Europe was derived from the inability of the Malacca ships to reach Aden and Jedda in a single monsoon.[47] The pattern of wind system in the Indian Ocean determined to a large extent the location and the relative economic weight of many trade centres. For navigation in the Indian seas, as Tavernier also pointed out, was not carried on at all seasons as it was in the European seas. Outside the proper season no one ventured to put out to sea.[48] Between Surat and Ormuz, navigation was possible only in the months from November to March when the monsoon blew in alternative directions. The Coromandel trade was equally seasonal, and ships from Masulipatam to the Red Sea followed the same rhythm as those of Surat.[49] But the voyages to the East Indies and China were far more critical in point of timing. Ships could get down to Bengal and as far as Malacca up until March, when the south west wind set in.[50] The return voyage from Manila or China called for at least two reverse changes of wind, and the Surat shipping often had to take shelter in the straits of Malacca during the months of contrary wind.

The predictability of the wind system and consequently the risk of storms and severe gales probably left its imprint on the design and construction of ships. Medieval Arab and Indian shipping was built without iron, the planks being held together with coir ropes. These sewen vessels had the advantage of being flexible in shallow waters but they were not strong enough to withstand really long voyages and bad weather at sea.[51] It has been argued that with these ships at their disposal the Arab and Indian merchants would have found it impossible

to round the Cape of Good Hope and sail into the Atlantic.[52] The quick adoption of the iron nails by Indian shipbuilders after the Portuguese arrival is one indication of the deep impression which European naval superiority must have made on the traditional craftsmen and the users of their products. In the early seventeenth century, William Methwold, who was the Chief of the Company's Masulipatam Factory (1618-22), states that ships of upward 600 tons were built on the coast of Coromandel with iron, and his evidence is corroborated by Bowrey later in the century.[53] Apart from northern Coromandel, a great volume of Asian shipping was launched from the shipyards of Malabar which also had easy access to the teak forests growing on the western ghats. The durability of teak-built ships was so widely known that until the discovery of iron hulls, the trade of the Indian Ocean was universally carried in bottoms constructed in the shipyards of India and Burma, though the opposition of shipping interests in England prevented the Asian-built vessels from being used in the direct trade with Europe.[54] The emergence of Pegu, Bombay, and Calcutta as major shipbuilding centres in the second half of the eighteenth century owed a great deal to the superiority of local material and the lower cost of construction.[55]

The use of iron nails was the most important but not the only innovation introduced by European contact in the art of shipbuilding. By the end of the seventeenth century in size and design the hulls of Indian-built ships probably did not differ from those of European ones in any fundamental way, particularly within the same range of commercial uses. The traditional designs persisted more strongly in crafts used in coastal waters and for specialised kinds of naval warfare, such as the *grabs* and *gallivats* belonging to the Angrias, who were to become the strongest Indian sea-power on the western coast.[56] In the Red Sea and the Persian Gulf, the type of vessels known by the later name *of bum* continued to be double-ended, as they had been in medieval times,[57] but the stern of the big Persian *baghlas* in its highly ornate structure was directly copied from the Portuguese *naos da carreira da India.* Another tell-tale ornament, square dummy ports painted on the sides of ships, betrays the second area of European influence on Asian shipping. Very little is known about the traditional armaments of Indian or Arab ships before the coming of the Portuguese. In the seventeenth century no respectable shipowner of Surat would leave his ships unequipped with some heavy ordnance, and we know from the Dutch pass-books that the larger Surat ships carried twenty to thirty guns.[58] Many of the gunners employed in them were Dutch or English, and the European trading companies established a profitable sideline to their main business by selling naval guns to Indian merchants. The practice was later officially discouraged when it was discovered that the guns could fall into wrong hands. For example, in 1719 the Court of Directors gave permission to

the servants in Madras and Calcutta to sell guns on the Malabar coast as part of their private trade only on condition that these did not exceed 5 cwt and were not of a large calibre. It was the large guns mounted on his ships, which made Kanhoji Angria, the great Maratha privateer, so dangerous. In a calm he could lie outside the range of ordnance in European shipping and tear them to pieces with his own heavy guns, which exceeded in size 15 cwt.[59] The employment of European gunners and navigating officers on Indian-owned ships was an acknowledged fact,[60] but it raises an intriguing question. The traditional rigging of Indo-Arab vessels was based on the use of the lateen sail, which presumably would require a form of seamanship different from the handling of square-rigged ships. Did the European captains and officers who are so often mentioned in the records as being in command of Asian shipping possess the skill to handle lateen sails or were these ships already converted to the square rigging?

A contemporaneous description of seafaring life in the Indian Ocean makes it clear that the *nakhoda* commanding an Asian vessel or the captain in charge of a European private ship frequently assumed the function of the sailor and the merchant. They may have a substantial financial stake in the cargo carried by a particular ship and always decided the priorities in its sailing schedule. In addition they could make alterations in the programme of destinations the ship was bound for if later commercial information justified the change.[61] It was vital for the success of a voyage that the master of the vessel, in addition to his nautical skills, should also have a considerable knowledge of markets and commodities. Although comparable Indian material is lacking, from the papers of notable English sea captains such as Thomas Bowrey, Thomas Pitt, and Alexander Hamilton, all of whom combined active private trading with their command of ships, it can be demonstrated that the strong emphasis placed by them on collecting economic intelligence originated from a unique quality of pre-modern trade, its speculative and discontinuous character.[62] Even if the monsoon had not imposed its own autonomous rhythm on the pattern of Asian trade, it is likely that the small margin of surplus available for external exchange, the distance scales relative to the means of transportation, and the absence of a compulsive, uninterrupted link between industrial production and the supply of raw materials would have created an uneven flow of activities, a market system that was in a state of perpetual disequilibrium. The only way to minimise the risks inherent in long-distance trading was the intuitive judgement of merchants based on direct experience and recorded information. The extent to which the direction of trade was variable and influenced by these factors is vividly illustrated by a letter written from the Achin road by Captain Thomas Garland, commander of the country ship *Rose Galley*, in 1730. The letter

was addressed to Robert Cowan, the governor of Bombay, who had fitted out the ship in association with some other commercial partners for a voyage to Bengal and the East Indies. The *Rose Galley* left Calcutta in October with a cargo of opium and instructions to dispose of it in Malacca. But Captain Garland decided to change his destination after ten days out at sea when he overtook and passed another vessel which had also left the river Hugli with opium consigned to Achin. When Garland was in Calcutta, it was generally reported that the price of opium was very high in Achin. In the event the *Rose Galley* arrived at the Sumatran port eight days ahead of Captain Miller, the commander of the other ship, and several chests of opium were sold at the equivalent price of Rs 405 per chest. A vessel which had just arrived at Achin from Malaya, the port of Kedah, advised Garland that there was a great 'plenty' there and opium much in demand. Accordingly he planned to sail with the first wind to that port where he hoped to put off a large quantity so that 'my dependence on Malacca may be less'.[63] As opium was a high-value cargo and sold in small quantities, it was easy to effect such switching from one port to another if the traders were able to obtain accurate advance information. With other commodities and in regular markets there was less need for rapid transhipment of goods, though the actual volume of transactions in overseas areas always remained difficult to predict.

The commodity composition

The degree of risks incurred by foreign traders in the international trade of Asia during this period depended a great deal on the nature of the commodities that were being bought and sold. A number of classifications can be adopted for the purpose of analysing the commodity composition of Asian trade. The most widely used contemporaneous categories were the binary terms 'rich' and 'gruff' goods. Both of these implied certain constraints on the choice of decisions open to merchants. In the case of bulk goods, for example, they were much more tied to fixed locations, particularly if these were of a perishable nature. At the same time if the ship carried high-value cargo as well, they could afford to pay less attention to the profit margins on gruff goods, as their main attraction was to reduce overhead charges. A perennial anxiety pursuing the pre-modern merchant was the question whether a particular port or trading region was capable of providing suitable cargoes which would enable the ships to be fully laden both on the outward and return voyage. To the categories of rich and staple commodities can be added our own conventions of manufactured goods, raw materials, and foodstuffs. The demand for industrial products, even in a pre-machine age, measures the extent of specialisation and the division of labour reached

by a society. There is no question that from this point of view the Indian subcontinent and China possessed the most advanced and varied economies in Asia in the period from 1500 to 1750. Indian cotton textiles not only faced one of the most stable and continuous demands in Asian foreign trade but were also finely adapted to suit the specialised tastes of different markets.[64]

The adaptability of the Indian textile industry and its capacity for an astonishing product differentiation were the two factors most responsible for the creation of extensive regional markets. In this respect it occupied an exceptional and unique place among Asian manufacturing industries. For all other oriental craft products, such as Chinese silks and damasks, porcelain, Middle Eastern carpets and rugs, and wrought metalware, either fall into the category of luxury articles or had access only to limited markets. The existence of these rich commodities nevertheless allowed the South Asian traders to balance their return cargo, and there is evidence that Chinese porcelain and celadon ware enjoyed fairly widespread popularity among wealthy Muslim families, though the traders had to be careful to avoid pieces which depicted the human form.[65] There was finally another category of goods whose existence in the seaborne trade of Asia cannot be ignored: the imports of European industrial products. In the sixteenth century the Venetians had imported into Alexandria Italian woollen cloth, tapestries, drinking glass, metalware and arms, which were transhipped to Suez and distributed in the Middle East as well as in India.[66] The trade in woollen textiles survived into the next centuries in the hands of Armenian merchants who had developed an active commercial network from their base at Julfa in the suburb of Isfahan, and in the 1720s competition from French woollen fabrics imported by the Armenians through the eastern Mediterranean proved to be a serious embarrassment to the sale of the East India Company's own imports.[67]

Apart from the normal risks of a sea-voyage, there were no particular problems in the transportation of rich commodities. The absence of centralisation in industrial production, on the other hand, combined with high costs of land carriage, made it difficult or unnecessary to create a large volume of trade in raw materials. The two major exceptions were the textile and the metallurgical industries. In India the wide diffusion of cotton weaving did not always imply a complete reliance on locally available raw materials. The soil in central and western India was particularly suitable for the cultivation of the cotton plant and these areas in the subcontinent traditionally exported their surplus to Bengal. In the long coastal run from Surat to Hugli bales of raw cotton provided an ideal bulk cargo and a profitable source of revenue to traders who intended to invest the proceeds in the high valued products of Bengal.[68] The Kasimbazar silks, the Dacca muslins, and the silk yarn were a per-

feet mix of finished goods and raw material. The weaving industries of Asia also needed dyeing materials, at this time based almost entirely on organic substances. Within India there was a busy interregional trade in indigo, which was exported in large quantities to the Middle East for carpet and chintz printing industries, just as the Mediterranean supplied Asian textile workers with cochineal for the red dye. Some of the commercial dyestuffs were indispensable to craftsmen, as reliable and cheap local substitutes were only rarely available. The limitations imposed by the location of production applied with even stronger force to the metal crafts. India had extensive deposits of iron and some copper but was deficient in other metals. By the middle of the seventeenth century, Indian copper mines were progressively exhausted, and copper from Japan and Sweden began to replace the domestic supplies. As an industrial metal it was an essential ingredient in the manufacture of household utensils, alongside tin which was used for coating the copper surface, and of course copper had a very important role in the monetary and currency system of India. The Malayan tin exported through Kedah and Achin was sold throughout India and the Red Sea, and its relative softness made it easier to work with than the harder Cornish tin imported by the East India Company. Another metal regularly supplied from China was tutenag, an alloy consisting of copper, zinc and nickel. Though unwrought metals figured prominently in many branches of Asian trade, the actual pattern of demand exhibited cyclical characteristics associated with the production of durable goods.

Given the wide range of climatic and geographical areas covered by Asian trade and the relative shortness of the sea-crossings, it was to be expected that most of the commodities in the category of bulk goods should be foodstuffs.[69] Many regions enjoyed a permanent trade in the export or import of foodgrains, while there were few areas which did not have to resort to casual trading at times of a temporary surplus or harvest failures. The existence of the busy Red Sea ports and the coastal settlements depended critically on the imports of grains from Egypt, supplemented occasionally by shipments from India.[70] The shipping records kept by the English factory at Mokha in the 1720s show that the most important cereal brought from India was Malabar and Bengal rice.[71] The frequent failures of rains and the consequent scarcities in the Indian subcontinent meant that grain was being continually transported from the surplus areas to the deficit. Wherever water transport was available grain moved easily and cheaply, and even in times of normal harvest there was a large trade in the more expensive varieties of foodgrains, wheat, rice, and pulses. On the west coast, Mangalore was the main centre of export, and at the first sign of a scarcity ships hurried down from Surat and Bombay to take in stocks of rice.[72] As prices rose under the impact of famine conditions, it became profitable to speculate

in grains. In 1695 large areas of northern, western, and southern India witnessed drought, and many wealthy merchants of Madras imported large quantities from Vizagapatam, although some of them made heavy losses through overlong storage and the decay of the grain.[73] The dubious morality of making a profit out of grain at a time of hunger did not go unnoticed. Referring to the famine of 1695 Samuel Baron remarked in his memorandum on the country trade of Madras, 'The scarcity of grain hath increased the Trade to Bengal. But the plentifull season of rain will (it is hoped) put a stop thereto. For surely there can be no advantage more uncomfortable than that which arises from the poverty and misery of the poor though it may be as well charity as interest to deal therein at sometimes.'[74] The areas around Madras, the middle part of the Goromandel coast, appears to have imported rice regularly from the Godavari delta, Ganjam, and even Bengal. When local supplies failed - a frequent occurrence - the township of Madras was of course entirely dependent on these distant imports. The same social conscience displayed in Baron's remarks was visible also in the Court of Directors' standing instruction to keep a permanent stock of rice in Madras, purchased officially on behalf of the Company.[75] These measures only reflected a belated awareness of conditions that were endemic in the climatic history of the region. Bengal was always looked upon in contemporaneous sources as one area that could be relied on to supply food when crops failed in other parts of India.

Although rice was exported from Bengal to Achin, in general the direction of grain trade was from the east to west, and there were other commodities in the category of foodstuffs and bulk cargo which shared a similar orientation. But it raised the difficult problem of finding suitable return goods from the Red Sea and the Persian Gulf. The Bengal ships returning from Surat could bring back raw cotton, supplemented by tobacco, which had been introduced in Gujarat and Coromandel at the end of the sixteenth century.[76] If they went on to trade beyond Surat, the alternatives were to ship coffee at Mokha, dates from Basra, or buy thoroughbred horses in Bandar Abbas. The trade in fine Arab horses was a long-standing one and highly profitable, as India did not produce high quality stock.[77] The Middle East also provided several high value luxury products such as incense, the *attar* of roses, and Shiraz wine. The latter was made by Armenian Christians and had a large market in India.[78] Finally there was the most famous and widely used Middle Eastern delicacy, the dried fruits and nuts from the Yemen, Persia, and Afghanistan. In return for these semi-luxury and luxury products, the eastern regions of trade supplied spices, pepper, and sugar. These were commodities in which the European trading companies came to acquire a high stake, and by the end of the seventeenth century the finer spices of the Moluccas and the Indonesian pepper imported

into Gujarat and the Persian Gulf were almost entirely in the hands of the Dutch. In the sugar trade the Asian traders were more successful in maintaining their share. It was imported to Surat both from Bengal and China and was a standing cargo for ships bound for Mokha and Gombroon. Sugar was also sent to Persia by the Dutch from Java, and in the eighteenth century the rise of regular commercial relations between western India and China owed a great deal to the exchange of Gujarat cotton for Chinese sugar.

English participation in country trade

To the Dutch and the English East India Companies a share in the inter-port trade of Asia was an essential part of the broader commercial objective. By the 1660s the ships belonging to the V.O.C. were regularly unloading at Surat and Gombroon commodities of the eastern islands shipped from Batavia. According to an English report of 1673 the Dutch imports during the current trading season included substantial quantities of cloves, nutmeg, mace, and cinnamon. They also brought 4000 *maunds* of pepper, 6000 maunds of sugar, 4200 maunds of copper, and 4000 maunds of lead.[79] The cash returns available from the sale of these imported commodities were invested in providing cargoes not only for the Netherlands but also for trading establishments in Persia, Mokha, Indonesia, Malacca, and Japan. In the records of the V.O.C. there are lists of minutely differentiated cotton textiles purchased in India, and each list is appended under the heading of various Asian factories as well as the all-important category of *Patria.* As far as the Dutch Company was concerned there was no problem of market uncertainties in selling Indian textile goods in the different trading regions of Asia, and the whole structure of Dutch inter-port commerce in the Indies rested on a closely controlled organisation centred in Batavia.

In marked contrast, the English Company never succeeded in approaching the administrative or economic efficiency achieved by the V.O.C. in setting up its official country trade. The lack of sufficient trading capital in the early years of its activities in Asia was supplemented later by the failure to create a strong political base comparable to Batavia. But a far greater obstacle to the East India Company's success in the Asian branch of commerce lay in the attitude of its own servants. By permitting them to engage in the trade of the Indian Ocean the Company allowed an area of conflict to develop between its official objectives and the private interests of the agents. The intractable nature of the problem is seen very clearly in a letter written by the Court of Committees in 1660, complaining about the poor sale of the Company's goods sent from Madras to Macassar in 1659, which was entirely attributed to the private trade of the factors.[80] During the first half of the

eighteenth century the development of the Company's own country trade was paralleled by the rapid build-up in the number of voyages promoted by the servants resident in Calcutta, Madras, and Bombay, where they were joined by a growing colony of Tree' British, Jewish and Armenian merchants.[81] In general the Court of Directors was sympathetic to the idea of its agents making commercial fortunes out of the Asian trade, provided their activities did not interfere too much with the Company's business. At times, as in 1732, the conflict of interest became so great that the Court could no longer ignore the flagrant non-compliance to orders on the part of the Bengal servants in favour of their own trade.[82] This was a period in which the value of private British investments in the inland and seaborne trade of Bengal was probably not much less than that of the Company itself.[83]

As long as Bantam remained the main centre of English trade in South East Asia, the East India Company retained a strong incentive to organise commercial voyages between India and the eastern islands. But unlike the Dutch Company, the profits were to come less from a two-way traffic and more from the sale of Indian goods in Bantam, Jambi, and Macassar. This concentration on the piece-goods trade proved to be a source of weakness for the English Company. The demand in Bantam was sensitive to the volume of goods imported by the Dutch and the independent Indian merchants in the adjacent ports, and from 1670 onwards there are repeated references to a saturation of the market.[84] There was also a lack of co-ordination in the exchange of commercial information between the Indian factories and Bantam. The latter's chronic complaint of being sent unsuitable or inferior textiles only provoked the counter-accusation by the Coromandel or Surat factors that the lists of orders were not specific enough about the quality, colours, or the dimensions of the goods demanded.[85] If the unsatisfactory results of the Company's country trade between India and Bantam during this period was a discouragement, information was not lacking that it was profitable to some traders.[86] The Court pointed out in a letter of 1676 that the Danish traders never bought their pepper at Bantam with ready cash but always with Indian goods and even English private vessels sailing from Madras had a profitable trade with the merchants of Silebar who brought their pepper to Bantam. The real reason for the bad sale of the Company's imports was the underhand behaviour of the servants and their betrayal of the trust reposed in them.[87]

In the face of such direct accusations, the Madras Council could hardly remain silent and their angry reply was to compare the Danes to the South Indian Chuliar pedlars who bought cloth directly from the weavers and sold it in Bantam by the piece, carrying the packs on their shoulders. Sir William Langhorn, Agent at Madras, freely admitted that

this method of trading gave the peddling competitors a distinct advantage in costs.[88] The capacity of Asian traders to subsist on a diet of rice during a long sea-voyage was put forward earlier as another reason for the uncompetitive position of the Company's shipping in Indian waters, and the view that Europeans were undercut in Asian trade by the low living standards of indigenous merchants was to be heard later at frequent intervals.[89] But in 1676 both Surat and Madras agreed to submit to the Company that its official trade to Bantam should be discontinued because of the continuing losses.[90] The Court of Committees was not willing to accept a recommendation so convenient to the interests of the servants, and repeated in their next letter the determination to keep the southern trade in the hands of the Company. The Surat Factory was asked not to give any encouragement to the Bantam factors in selling their private goods and providing return cargo.[91] However, the days of the Company's Bantam trade were coming to a close. In the spring of 1681 ships bound for the Indies carried instructions that in future no further commercial voyages were to be undertaken between the ports of India and South East Asia.[92]

The Company did not give any explanation for its dramatic and sudden decision to withdraw from the local trade of the Indian Ocean. The attention and resources of the Company were closely occupied in these years in combating the interlopers and exploring the commercial opportunities of a direct trade with China; but the decision raised the difficult problem of employing the shipping tonnage which was temporarily in excess to what was required for the European trade. To avoid a contingency of this kind and give a positive encouragement to English navigation, the Company proposed in 1682 that from the following year all East-Indiamen would spend an extra year in Asian waters on demurrage to be let out on freight voyages to any part of the Indies that the Councils thought fit.[93] As usual the Surat Council found it objectionable that the Company should have shifted its emphasis from direct participation in country trade to become a competitor in another profitable area of investment, the transport of freight goods. The tendering of the Company's ships for Asian voyages, it was pointed out, would be a severe blow to the economic fortunes of those servants who had become shipowners.[94] A possible reason for the Surat Factory's unease may have been connected with its awareness that the Company was taking more than a casual interest in the charter business and the trade of the Middle East. The hopes of the members of the Court of Committees had been aroused through discussion with an expert on the area, who had informed them that more than sixty ships annually sailed from Surat for the Near Eastern destinations, laden with cotton piece goods, Ahmedabad silks, indigo, and drugs.[95] The suggestion of chartering the Company's ships to the local trade may

have itself come from the shah of Persia, who undertook to guarantee the necessary volume of goods in Gombroon.[96] One of the side-products of the Company's renewed interest in the Persian trade was an attempt to break into the sugar market. In 1682 a quantity of Barbados sugar was sent to Persia to try out the demand. The experiment was discontinued as a result of the stronger competitive position of Bengal sugar, cheaper and better suited for the local confectioners. Instead of re-exporting West Indian sugar through London, the Company adopted the easier alternative of shipping sugar from Bengal to Gombroon. In 1684 the ship *Hare* brought 2781 bags from Bengal valued at Rs 56760, and instructions were given to the servants that even in cases where it was not possible to export sugar directly to Persia, it was to be stored in Bombay and transhipped to Gombroon when shipping became available later.[97]

The strong pressure which the Court of Directors put on the Indian settlements left them with no option but to try to reduce the volume of excess shipping by letting them out on charter. The ships were often hired by the members of the Councils for their own private trade. On other occasions notices were put up in Surat or Hugli inviting freight. In 1712 the Calcutta Council decided to send the ship *Recovery* to Persia, and the Company's broker was ordered to give public notice in Hugli and also get together a sufficient quantity of bulk goods to fill her up, 'being uncertain of getting freight enough to load her because of the troubles up in the country'.[98] The commercial calculations on the profitability of the *Recovery's* voyage give us a fascinating glimpse into the margins with which the merchants of eighteenth-century India operated. The freight revenue on 240 bales of goods (720 maunds or 24545 kg) at Rs 8.5 per maund was estimated at Rs 6120. From other commodities, shipped on the Company's account, the Council hoped to make the following amounts, the calculations being based on the latest reports of prices prevailing in Persia.[99]

Quantity maunds	Commodity	Estimated cost value Rs	Estimated sale value Rs	Estimated profit %
3000	Sugar	15000	23718	58
600	Ginger	2100	3175	151
2000	Rice	1000	5000	400

These figures may show large profits, but they were not unrealistic. In the private papers of Sir Robert Cowan, the governor of Bombay and an active country trader, there are similar calculations which confirm the margins estimated by the Calcutta Council. The draft plan of one particular voyage to Bengal in 1730 shows that Cowan and his trading

partners were hoping to make a net profit of 144 per cent after deducting all operating costs by selling raw cotton in Bengal and importing rice and sugar to Surat.[100]

It is, however, worth remembering that not all voyages were financially successful and made returns which satisfied the expectations of the promoters. From the number of complaints about the badness of markets and low prices of goods in Asian ports, we can in fact conclude that the European traders in the Indian Ocean were always on the verge of commercial ruin. In 1730 George Morton Pitt wrote to Cowan from Madras that the members of the Bengal Council were very unsuccessful that year; for besides their losses in Persia, goods worth seven or eight lakhs of rupees were lying unsold in the Red Sea.[101] Yet this was a period of relative prosperity for country traders, though the Court of Directors warned its servants in India against the danger of damaging the prospects of the Company's own freight voyages by overdriving the trade to Persia, Mokha, or China. The high returns of good years helped to absorb the disappointments of bad years, and everyone was aware of sudden untimely death. When early in his career Robert Cowan asked the advice of James Macrae, shortly to become the governor of Fort St George, about the headship of a possible profitable factory, Macrae replied, 'I cannot tell what to advise you to in particular, but in general I give you my opinion that you go to any Chiefry where the Governor and Council thinks you may be of service to the Company and be not anxious that things do not answer so soon as you expected. You are young enough to raise a moderate fortune to support old age. If you dye by the way (which God forbid) you will not want it.'[102] Sir Robert Cowan was dismissed from the governorship of Bombay in 1734 - ten years after he had sought Macrae's wisdom - on a charge of corruption. He died three years later just as he was on the point of remitting home a fortune of £40000. In his will Cowan made full provision for the repayment of creditors who had suffered when two decades ago the young firm of Cowan and Lort went bankrupt in Lisbon.[103]

If long residence in the Indies created hazards to a man's health and life, the risks were fully known and mitigated by the possibility of making fortunes in trade. The danger of incurring ruinous financial losses on the other hand was minimised by underwriting only a small proportion of a ship's total cargo and spreading the risk over many subscribers. Among European private traders in Asia during the eighteenth century, individual ownership of trading vessels was common enough, but it was rare to find a single owner of a whole ship's lading, as was the case with indigenous merchants. Competition among the Company's servants in different settlements trading to a common port or region frequently led to the suggestion that the economic interests of the rival groups would be best served by forming some sort of joint-stock owner-

ship of capital. These proposals never led to any concrete results, and in the main English private trade in Asia was carried on the basis of informal partnerships and mutually advantageous correspondence.[104] The East India Directorate in London was content to leave such arrangements alone so long as the officials' private affairs did not interfere with the official business of the Company.

10

EXPORT OF EUROPEAN COMMODITIES

General policy

A remarkable feature of contemporaneous economic thinking on international trade was the expectation that each commercial area with which a particular country had bilateral relations should generate its own purchasing-power and thus become self-financing. Whether it was trade with Spain and Portugal, France, or the Baltic, the desirability of balancing the respective exports and imports was seldom questioned. When overseas trade is relatively unrestricted and the financial institutions connected with it are sufficiently developed, it is unnecessary for merchants themselves to engage in a two-way traffic. The task of financing the exports or imports properly belongs to the banks which handle the foreign exchange market. By the end of the seventeenth century even English overseas trade was drawn into the ever-extending orbit of the European multilateral exchange mechanism. There was still one notable exception, however, the trade of the East India Company remained in a very different situation. Its legal monopoly effectively prevented the emergence of a competitive bill market until the private trade of its own servants, along with the trade of free European merchants, created in Asia a limited source of capital under foreign ownership. Although interregional trade in India was extensively financed through well-established networks of credit instruments, so far as Europe's trade with the Indies was concerned exponents of economic policy in the seventeenth and eighteenth centuries still laboured under a heritage of ideas derived from the days when international commerce was conceived of only in terms of bilateral relations. If it had not been for the continuous pressure on the Company from the public and the legislature to help the national economy by creating new overseas markets for its manufactured goods, it is doubtful whether the Company would have exported anything other than precious metals. The price paid for the monopoly was the vexatious obligation to send out annually a certain proportion of the total exports in commodities and not wholly in bullion and coins.

At the same time we should not lose sight of the fact that it is more profitable to traders to export goods rather than money. No merchant

if he was certain of finding a market would go against his commercial instincts by making cash payments on transactions that could be paid for in goods yielding a second profit. That the East India Company was unable to do so on any significant scale pointed to the structural imbalances in world trade in the early modern period. But the Court of Directors did not forget the basic rules of trade. The evidence for this comes from a letter written to the Bombay Council in 1719, a year which marked the end of a difficult decade for the Company when a crisis in the bullion supply was culminating in a parliamentary campaign against its commercial practices. In India, the Bombay Council was informed, an ounce of silver would not purchase more goods than it had done before, no matter how high its price in Europe. Whereas the Company's export commodities were bought in England with a domestic currency still nominally fixed at the rate of 5s 2d an oz of standard silver, and the gain from the sale of such goods accrued to the nation and the Company alike instead of going to other countries as in the case of silver exports. What the Court of Directors was saying in effect was that the rise in the price of silver above the mint price in England shifted the terms of trade against the Company. As for the political argument, 'your own reasons as well as our letters,' the Court continued, 'have and will tell you how much it is our advantage to increase the exportation of our woollen goods, not only as it is a popular argument here and helps to maintain our own manufacturers and enrich our country but likewise as it tends to silence the popular clamour against us of shipping out so much bullion which grows dearer and dearer as there is a demand for it'.[1]

Experience had taught the Company since the early years of the seventeenth century that it was dangerous to dismiss the popular clamour lightly, particularly as it was apt to find willing spokesmen in parliament. Although the charters of 1657 and 1661 did not lay down any specific conditions as regards the export of commodities, the Company made determined attempts in the early 1660s to enlarge the market for woollen goods, metals, Mediterranean coral, and ivory throughout Asia. The attack on the Company's monopoly made by the clothiers of Gloucestershire and Coventry in 1675 was yet another reminder that the reason for vigilance had not diminished. For in their petition to the House of Commons the clothiers alleged that the East India Company's exclusive rights prevented the free exportation of woollen manufactures to India, China, Japan, and other countries within the limits specified in the charter. It was also stated that the excessive amounts of silver exported by the Company must be held responsible for the low price of domestic goods. In reply the Court of Committees drew up the usual tables of figures showing the exact proportion between goods and treasure exported in the past years and pointed out that efforts were being

made to develop trading relations with Japan which might yet buy large quantities of English cloth and supply in return silver and copper.[2] The suggestion made by the Company's opponents on this occasion, that it should be turned into a regulated company, was too radical to succeed. But the agitation of 1675 demonstrated to the clothiers the moral lever they possessed over the Company. While the Court of Committees in its turn learned what was to be only a foretaste of the coming attacks on its privileges.

Even in the early Restoration years the Company needed little persuasion to convince itself that commercial safety lay in reducing the export of silver and increasing that of goods. During the two decades from 1660 to 1680 almost every outgoing letter to the Asian factories points to an ever-mounting anxiety. In March 1661 the Surat letter authorised the President to reduce the price of European exports if it would encourage greater sales. An advance of 20 per cent on the invoice price was acceptable.[3] By reducing the margin of profit on its exports the Court not only hoped to bring about a larger consumption in India but also drive out the illicit traders who were surreptitiously shipping broadcloth and other goods on the Company's own ships.[4] In 1663 the Company was prepared to accept only 5—10 per cent advance on the invoices, though a year later the Court hoped that if the goods could be sold at a greater profit it would be highly desirable, always bearing in mind that 'we shall prize the vent equall with the profitt'.[5] The attempt to expand the market through price reductions, which these letters bring to light, was perhaps the most explicit reference to the role of price elasticity of demand in international trade. But was the short-term elasticity for these goods high enough in India to permit such a policy ? The reports from the Company's servants certainly indicate the existence of a fairly extensive market, though the local outlets available to the English merchants were always highly sensitive to the conditions of oversupply. In the early eighteenth century according to an assessment made by the Calcutta Council the quantities of woollen goods imported into the Mughal Empire by the European companies and the Indian merchants through the Middle East were excessive. The lowering of the price, the Council thought, would not substantially increase the sale, as they were purchased only by the 'great men' who would not value them if they became articles of common consumption.[6] The obvious logical fallacy in this circular argument received no comment from the Court of Directors.

From the surviving evidence, often pointing to contradictory trends and directions, there is no way of telling with any certainty whether or not the demand for European exports was elastic and capable of absorbing large quantities, as it is a function among other things of marketing methods and the efficiency in distribution. The policy of expansion

which had been set in motion by the Company's internal needs at home was being strongly resisted by the Chiefs of the Indian factories in the 1670s. Sir William Langhorn, the irascible Agent of Madras, wrote to the Court in 1676, 'Note that the sales of Europe goods is no furtherance to the Investments, but the contrary, being things merely obtruded upon them in favour of the English manufactures and a mere burthen and pestering of their godowns *[warehouses]*.[91] Three years later the Surat factors took an equally strong line against the charge of being wasteful of the Company's resources, 'As you are pleased to value yourselves upon us,' the letter protested, 'first by a considerable loss upon the sale of the greatest part of the goods, next bad debts and lastly charges, all which are unavoidable so long as you continue to overcloy these Markets either with more than able to take off or such as are improper.'[8] Protests couched in language such as this might be expected to produce some effect, and indeed from the 1680s until almost the end of the century there was a substantial decrease in the proportion of goods, as opposed to treasure, sent to the Indies. The Surat General Letter of March 1680 brought evidence that the Court of Committees was now ready to listen to the advice of the factors so frequently administered in the past, 'we have sent you little stock in goods, but mostly in Bullion as you have desired . . . such goods as we have now sent will no ways clogg your markett'.[9]

The East India Company was seldom allowed to forget that England lived by exporting. Wars, trade depressions, or difficulties in obtaining bullion revived political agitations against the Company and the accompanying hope in the minds of the Directorate that Asia might be persuaded after all to buy European goods. In 1682 the Court wrote to Surat that it would be highly pleasing to the king and the parliament if the Company's servants could force a greater 'vent' for broadcloth and lead, even if it meant making small profits.[10] In 1700 Madras was being urged to take all active steps to promote the sale of cloth and other European commodities. Whereas forty years before the Company still had some hopes of making a profit on the cost price of its exports, now it was prepared to be satisfied if 'an ounce of silver here laid out in goods produce on their sale an ounce of silver again immediately'.[11] The high price of bullion and the debasement of the currency, as we have already seen, had added their economic weight to the legislative pressure on the Company to review its export policy.[12] This pressure in fact took on a concrete form during the intense controversies surrounding the renewal of the Company's charter in 1693, when the members of the Court were forced to give their personal bond promising the export of £150000 in commodities which were 'the growth and production of England' before the end of the year. This concession, the Court hoped, would help towards the confirmation of King William's charter by the approaching session of parliament.[13] Subsequently the charter of 1698 stipulated that

one-tenth of the total value of the Company's exports must be in English goods.[14]

When the two rival East India Companies were formally united in 1709 the condition was reconfirmed, and with it the choice facing the United Company narrowed considerably. One of the by-products of the earlier enactment had been the decision of the Court to attack the Persian and Middle Eastern markets, the traditional preserves of the Levant Company. As early as 1686 they were expressing a desire to exploit the Persian demand for woollen goods more fully and hoping to develop a new channel of trade through Basra into the Ottoman Empire.[15] The sudden growth of Armenian trade from England in the early 1690s gave an added impetus to a natural inclination to embarrass the Turkey merchants for their attacks on the Company.[16] The Gourt asked the Persia Agency in 1691 why the Company's sales there remained so small when the Armenian merchants had informed them that the Persian Empire annually consumed 30000 pieces of cloth exported by the English, Dutch, and Venetians. The Court was convinced that the East India Company could supply cloth much more cheaply than any other merchants because it was not obliged to pay customs duty at Gombroon and its ships were free of freight charges on the outward voyage.[17] If the new policy brought them into conflict with the trading interests of the Levant Company, that was entirely the latter's own doing; for in 1693 it was clearly stated that 'the Turkey Merchants . . . have assaulted and battered at the East India Company perpetually for not sending out the English Manufacture and magnified themselves by the popular notion of sending out such great quantityes of English Cloth by the inculcating which pleasing argument to King, Lords, and Commons, they have brought upon this Company a necessity of reviving their ancient Cloth trade in Persia, and prosecuting of it effectually'.[18]

Apart from strengthening the Court's resolution to enlarge the market, the statutory fixing of a minimum value of exports in goods had two other consequences. The Company was now faced with the alternative of either exporting the stipulated amount of goods irrespective of demand conditions in Asia and thus incur a heavy financial loss or of reducing the total value of its exports so that, if the demand was slack, the one-tenth sent out in commodities should not exceed the indents specified by the Asian settlements. Any number of letters dating from the early eighteenth century testify that both the problems with their unacceptable implications on the Company's overall commercial policy frequently materialised. In 1714 the Court writes to Bengal that political troubles in Persia and the negligence of the Bombay servants in disposing of their previous stocks of woollen goods made it imperative that fresh supplies to western India be reduced, which in its turn meant that the Company would have to increase the quantities to Bengal and Coro-

mandel beyond what was asked for, otherwise the total stock would be cramped. The factory is urged to introduce the use of woollen cloth to the cool and moist northern provinces of India, which were also reputedly rich and populous. In any new branch of trade certain initial difficulties must inevitably be encountered, but once these were surmounted by prudent management, the Court believed, trade should follow the beaten path.[19] In 1718 because of the slackness of demand in Surat the Company was actually obliged to reduce the export of bullion in order to satisfy the legal requirement.[20] Such examples could be multiplied from the later years of our study. In 1735 no broadcloth was sent to Madras, but the Council was forcefully reminded that this put the Company to great inconvenience as the failure of the usual demand in one place necessitated the overloading of the other settlements.[21] In this period too the old idea of increasing sales by charging low prices was often repeated, perhaps more out of habit than real conviction.[22] There is clear evidence that the trade in European goods had settled down to a steady path, predictable both in its slumps and booms. After 1703 even the Madras Council, which in the past had experienced the greatest obstacles, was successful in persuading the syndicates of Indian merchants who supplied the Company's imports to accept European commodites, as a condition of purchase, on terms that showed a gross profit of 20 per cent on their invoice value. By 1754 so far as the trade of Bombay was concerned the wheel seems to have turned a full circle, and the Company was insisting that 'the outward Trade to your Side of India should be pushed with the greatest vigour to make us some amends for the loss on the homeward bound cargoes which you cannot but be sensible must have been considerable for several years'.[23]

The nature of demand and the regional markets

The European exports to Asia in our period fall into three categories, as it has already been mentioned in passing. The most important were the various kinds of woollen textiles, of which the broadcloth occupied the most predominant position. These were followed by unwrought metals, copper, iron, lead, and tin, and lastly there were various miscellaneous luxury items such as coral, ivory, sword blades, and *objets d'art.* The limited range of the goods sold in the Asian markets surprisingly provoked little contemporaneous comment compared with the observations on Asia's apparently insatiable demand for silver. The authors of the numerous pamphlets and tracts on the East India trade who busily devoted themselves to exposing the damaging effect of a one-sided trade seldom paused to reflect on the consuming habits and needs of Asian populations. That seemingly uninteresting task was left to the actual merchants engaged in trade, and one of the greatest problems facing the

European companies struggling to enlarge their exports was to discover just what kinds of commodities Asia was prepared to take in return and how these might be supplied. Starting from this unpromising beginning, the East India Company needed to know urgently the detailed nature of the market it was asked to penetrate. Precise information was vital, as we can see from this standing order sent to Madras in 1664, 'We also require that a List be yearely sent us, of the severall sorts of goods and their quantities that are vendible [,] may be for our Government in the proportioning of our yearely cargo.'[24] With expanding trade the content of the Company's information system became ever more elaborate. In 1711 Madras was being requested to send home patterns, properly labelled and numbered, of the various kinds of woollen cloth preferred by the Indian merchants. Merely asking for so many bales of fine and coarse cloth was not enough and left the buying Committee in the dark as to the exact grade required as there were many different degrees of fineness.[25] The problem was simpler with regard to metals since these were intermediate industrial goods and served as inputs to domestic manufactures in India and elsewhere. But their demand was fairly volatile and the market suffered from these frequent changes. The sale of lead which had a constant and even rising demand was particularly liable to interference from government officials because of the metal's importance as a war material.[26] Iron was sent out mostly as ballast cargo which probably explains why its export remained steady. The Company often asked the Indian factories if the merchants made a distinction between Swedish and Spanish iron. The reply was in the negative. The only factor in favour of the European iron generally was its reputation for greater hardness and malleability than the iron produced in the subcontinent.[27]

Copper was of course used throughout Asia for currency purposes, although curiously enough there are few references in the English records to its demand from the mints. The metal was also used in Islamic countries for the manufacture of household utensils which were afterwards thinly coated with tin.[28] In India during the seventeenth century it was obtained both from inland mines in Rajasthan and Central India as well as from abroad, and in 1662 the Surat Factory noted that its price rose and fell according to the quantities imported by the Dutch from Japan, observing also that it could be regarded practically as ready money because of a brisk demand.[29] The two other items of the Company's metal exports excited little comment, tin and quicksilver. English tin, exported in small quantities and only sporadically, was preferred second to tin from the Malayan mines as the latter was softer and easier to work on.[30] Quicksilver always found a ready market for medicinal use, though its export by the English Company became insignificant from the end of the seventeenth century. A favour-

able harvest stimulated the sale of ivory and coral, both of which were utilised in the manufacture of jewellery and luxury products. In a report dating from 1740 the Surat Factory predicted that ivory was likely to sell at a high price that year because of a plentiful crop which would allow the 'lower sort of people' to purchase ornaments made from ivory, adding that a good harvest always had the effect of increasing the demand for it.[31] Anxious as the Company was to diversify and broaden its export base, there was one item whose fortune was an index of success or failure to all the rest. Selling woollen textiles to countries with climates warmer than that of Europe may seem a difficult if not an absurd task, and the difficulties were only too well understood by the Court. But the Company had little choice in the matter, and commercial survival required that the supply should create a demand.

The type of cloth exported by the English merchants both to the Levant and the Indies was one traditionally known as broadcloth. The name derived from its width which was over a yard and a quarter, as opposed to the width of narrow cloth such as kersey which was 27 inches.[32] The length of a whole cloth varied between 46 and 48 yards and a 'piece' in the terminology of the East India Company was half a cloth of 23-24 yards.[33] In texture and weight the broadcloth could vary a great deal, as the Export Committee often pointed out, and there was a considerable price differential between the coarse and fine varieties. Even within the same categories the price fluctuated from year to year by a margin of 15 per cent.[34] Besides broadcloth the Company also exported a certain amount of the lighter fabrics known generically as the 'new draperies', whose manufacture had been spreading across the country since the sixteenth century, although their quantities remained very limited until the end of the seventeenth century. In 1695 the Court for the first time explicitly mentioned that they were sending out sayes, serges, and other lighter woollens different from the woollens exported in the past because of the need to execute the bond imposed in the charter of 1693.[35] However, even in the eighteenth century the proportion of the new draperies was small compared to that of broadcloth. The preponderance of broadcloth in exports to Asia may appear puzzling, considering that it was thicker and heavier than the new draperies. It has been suggested that so far as the Levant was concerned the severe Anatolian and Persian winters made the warmth of the cloth appreciated there.[36] But the same argument cannot be applied to India, although in the northern latitudes of the subcontinent the winter temperature was sufficiently low to call for protective clothing. A fundamental misconception about the nature of the Indian market arose from the Court's impression that the demand came or should come from the use of the woollen goods as garments. It was this type of thinking that was responsible for the bizarre suggestion made by the Company in 1717

that the Indian merchants of Calcutta should be compelled to appear before the Council dressed in English cloth. The reply of the Bengal President took refuge behind the usual argument that Indians are not in the habit of giving up their forefathers' customs easily. The Council also pointed out that the Hindus of Bengal, in so far as they used broad-cloth at all, used it for cloaks, floor spreadings, saddles, slippers, and for lining the interior of palankeens.[37]

It is difficult to imagine why the Court of Directors should still have had any doubts on the point. For in 1713 the Bombay Council had categorically stated that Tew people wear garments of woollen goods, they are used chiefly for flooring rooms, horse furniture and pallan-keens'. The merchants consequently preferred a thick, middle quality cloth with a smooth nap.[38] Bombay's assessment was preceded by a much more detailed report sent by the Madras Council in 1712. In southern India, according to this report, woollen cloth was sold mainly to Muslims, the Hindus making very little use of them. This was a point that was also emphasised later on from Bombay where the Company's servants feared in the late 1720s that the Hindu military successes in the form of Maratha conquests would lessen the demand for broadcloth,[39] for the biggest sale of cloth generally lay in the Mughal military camps and the proximity of armies composed of large bodies of Muslim troops exercised a significant effect on local demand. The Madras report of 1712 gave details on the use of each type of cloth.[40] The coarse red and green varieties, for example, were in use chiefly among the ordinary soldiers and troopers for saddles, beds, prayer rugs, and tent-coverings. Fine broadcloth, such as scarlets, auroras, and a few blues and yellows, were purchased by 'great men' for lining their tents, Tor vests or mantles in the rainy season . . . covering cloths for the elephants and hackarys, cloths to hang round their drums, for shoulder and waste belts, scab-bards to their swords and *jimdars* or daggers'.[41] The expensive em-bossed cloth was used by the nobility to hang round the bottom of their tents and as carpet, while perpetuanoes had some use among the 'meaner sort of people' for making caps, coats, and covering 'cloths to sleep in during the rains'. It is evident from this lengthy description, which is supported by numerous other pieces of evidence, that the de-mand for woollen textiles as clothing was likely to be a very limited one in India and that their use was confined mostly to household goods. A decisive consideration in demand patterns was the high relative price of European imports. It was much cheaper for the ordinary people to use clothing made from cotton cloth, padded with raw cotton, which pro-vided effective protection against cold experienced in India, while the better-off classes probably preferred the fine and thin Indian shawls which harmonised better with the oriental taste in dress.

But the Company was fully aware of the need to adapt its woollen

textiles to suit the needs of the Asian markets, particularly in the matter of colours. In an analysis of the market for European commodities Aungier requested in 1673 'that great care be taken in preventing abuses in the length, breadth, collours, quality, goodnesse and prices of these your woollen manufactures', adding that it was the superiority of the English woollens in breadth, colour, and quality which caused them to sell better than the imports of the Dutch and the French.[42] The position was to reverse dramatically in the next century when French cloths rapidly established a preponderant reputation in Persia and India, which the English Company found difficult to challenge.[43] In 1731 as a result of repeated reports of the French success the Court sent out nine bales of cloth dyed according to French patterns of different colours as an experiment. Whether the practice was continued or not is not known. But in 1737 the Surat merchants refused to make any offers for English broadcloth on the ground that the French cloth imported from Jedda was not only cheaper than the former but their colours and texture were also better liked by the purchasers.[44] The importance of having proper colours was underlined not only by the weight of French competition. Cloth dyed in particular colours suitable for the Surat market was not saleable in Persia.[45] Each separate area had its idiosyncrasy in consumer taste. If the question of quality and colours played a leading part in the Company's sales promotion of broadcloth, there were also two other issues that dominated policy questions. One was the force of competition either from fellow European companies or Asian merchants who imported broadcloth through the Middle East. The other point concerned the structure and development of regional markets. An apparent contradiction often manifested itself in the factors' analysis of the broadcloth market in India. It was asserted frequently and confidently that there was no great demand for woollen textiles in the country. At the same time the Company's officials also noted that great quantities were imported from the Middle East, which prevented or hindered English sales. The cloth imported into India from Jedda, Basra, or Gombroon was of course European in origin and reached the ports of the Red Sea and the Persian Gulf through Aleppo. If only these imports could in some way be eliminated, a letter from Gombroon suggests in 1670, it would cause a much better and larger sale of English broadcloth imported by the Company.[46] Such statements did not clearly distinguish between the view that the total size of the market was restricted in India or whether competition from alternative sources of supplies prevented the Company's imports from tapping a potentially large market. The contradiction was never fully resolved. But in an age in which the maintenance of market share and the vision of a limited or slowly growing demand played a crucial part in framing commercial policy, it was easy to magnify the effects of competition. In the 1670s Aungier at least

was aware that the Middle Eastern imports were subject to the same forces of trade depressions which periodically afflicted the Company's own imports, for he reported from Surat in 1671 that 600 pieces of broadcloth had been imported that year from Persia, Basra, and Mokha, but as the market was very low in India the owners had lost more than 50 per cent on their sales, a loss that would discourage further imports through the Middle East in the immediate future.[47]

The Court of Directors, however, remained resolute that direct competition to the Company's exports must be checked wherever possible.[48] In the eighteenth century a standing preoccupation of the Court and their officials in India was to devise means to introduce 'wear of our woollen goods in the MogulPs army'.[49] For the report sent from Madras in 1712 left very little doubt about the extent to which the sale of broadcloth depended on military movements, 'The greatest consumption is in the MogulPs Camp, which when at Lahore or Delhi is supplyed wholly from Suratt and Persia; but when at Agra, partly from Suratt, and partly from Bengali by way of Patna, from which ports the conveyance to the Camp is easy and safe.'[50] But broadcloth sold in Madras was distributed mainly to the subadar's standing armies in Carnatic, Bijapur, and Golconda. When Emperor Shah Alam came down to the south in 1708, the Madras Council found that the presence of his army immediately quickened the sale of their broadcloth. In contrast the policy of the present subadar, that of cutting down the size of his army and keeping only 500 or so cavalrymen in his service, not only led to a substantial falling-off in the camp trade but also affected the more distant markets as the roads became dangerous for lack of proper patrolling.

The pressure applied to the Indian settlements to widen and extend the consumption of woollen goods in the Mughal Empire had its parallel in the Company's efforts to capture a greater share of the Persian market. The competition encountered in India from European woollens coming through the Mediterranean and the Red Sea, together with the exports of the Levant Company to Aleppo, reinforced in the 1680s the Court's conviction that a large and potentially profitable market was waiting to be exploited in Persia. When John Fryer visited the markets of Isfahan in 1677 he found that they were better supplied with broadcloth than Blackwell Hall itself in London.[51] The main obstacle to the Company's efforts to break into the area was likely to come from the Armenian merchants who purchased cloth from the Europeans at Aleppo and transhipped it eastward in order to barter it for the raw silk of Persia.[52] One way of softening this opposition was of course to enter into an agreement with the Armenians. This the Company attempted to do in 1688 when a contract was made with a leading Armenian merchant of Isfahan, Khwaja Panous Callendar, who was then living in London. The agreement allowed the Armenians to ship cloth on the

Company's ships in return for assisting its trade in Persia.[53] The large concentration of the Armenian merchants in Isfahan, engaged in the woollen cloth and silk trade, made the capital particularly well located for developing the Company's trade in broadcloth and to further its plan to divert the bulk of Persia's overland trade to the Mediterranean into its own hands. The Company was aware of the fact that some of the Armenian cloth traders in Persia may oppose its attempt to share the Middle Eastern market. In a letter to Isfahan written in 1697 the Court remarks, 'But some may think it improbable they should ever depart so much from their own interest as to advise us how to deprive themselves of the Aleppo Cloth Trade. To which we reply, it is true that it is not reasonable to expect it; it is against nature and reason to expect that such wise men should further our Trade to the ruine of their own, which peradventure they have been possessed of ever since any cloth was made in the World, for most certainly they *[the Armenians]* are the most ancient merchants of the world.'[54]

Whether the Armenians were prepared to help the Company or not, it is a fact that its cloth exports to the Near East failed to expand beyond a figure of 2000 pieces a year in the eighteenth century, a period which saw a spectacular increase in the volume of Mediterranean trade. The explanation for this failure lies in a number of separate causes. The strength of the Aleppo trade owed a great deal to the goodwill established over a period of centuries, which was not be shaken easily, as the Armenians pointed out in 1695.[55] Another reason was the competition from the French and the Russians throughout the first half of the eighteenth century. The rapidity with which the French established themselves in the Near Eastern cloth trade after 1708 was noted by both the Levant and the East India Companies.[56] The Court of Directors might wonder how French cloth could be shipped across the Mediterranean, transported to Jedda, and finally brought to Mokha to undersell the Company's woollens at cost price, but it was a well-attested fact that it happened.[57] French cloth was even invading the Indian markets and penetrated as far as Bengal. The Calcutta Council reported in 1735 that it was in much demand because of its cheapness.[58] The French textile industry of Languedoc owed a great deal to the financial encouragement given by Colbert, and its products exported through Marseilles dominated the middle-quality market.[59] A contemporaneous English tract pointed out that French cloth was much softer than English broadcloth and not liable to go threadbare or crack at the seams, as the latter did.[60] According to the reports sent by the Company's servants in India and the Red Sea its commercial success was as much the result of quality as of competitive prices. While the growth of French competition in the early eighteenth century was something on which the Company had a large amount of information, the nature of trade through Russia was

more difficult to gauge, though there is no doubt of its presence or importance. The Armenians were specially encouraged by Peter the Great and the Empress Catherine to trade with Russia.[61] In 1737 the Court of Directors mentioned in their letter to Bombay that the Russian merchants were supplying Persia with woollen goods. Three years later when there was a relative scarcity of such cloth in Persia, the Gombroon Factory attributed it to a failure of supplies from Astrakhan.[62] Merchants returning from Mashad in 1752 brought news that the Russians had established a regular trade in woollen textiles at the city of Urganj near the Aral Sea.[63]

The Persian market had become disturbed by political troubles even before the fall of the Safavid dynasty in 1722. The death of Nadir Shah in 1748 led to another period of civil war. The precariousness of the up-country markets resulting from the bad and unstable government was a constant theme in the correspondence of the Persia Factory in the 1750s. Trade nevertheless still continued, and merchants from Khorasan, or the great desert cities of Yazd and Kirman, found it profitable even in these years to come down to Gombroon and buy from the English and the Dutch, though 'their dealings are not near so considerable as formerly'. Many people, according to the Gombroon Factory, were now buying the cheaper variety of cloth known as perpetuanoes, as the affluent classes had become impoverished through the continuation of the civil war.[64] In India, too, insecurity of administration created periods of commercial depressions which affected the sale of the Company's export goods. In Bengal, Murshid Kuli Khan's well-known efforts to increase government revenue so inhibited the richer people that according to a letter from Calcutta nobody dared to appear to have money or wear stately clothes and display costly equipage.[65] This crisis in the Mughal Empire featured so frequently and prominently in the homeward letters of the Company's servants during the first half of the eighteenth century that the Court of Directors almost ceased paying any attention. In 1748 the reported effects of the Maratha invasions of Bengal produced the following response, 'We are sensible that woollen goods and other articles will stick on hand whenever the country is in trouble, which temporary evils must be submitted to, hoping trade would revive and a brisk demand ensue when affairs come to be settled.'[66] This passage also suggests an explanation of the Company's apparent resignation in the face of unfolding political events. The effects of the disturbances were seldom permanent and the Court knew from experience that the internal trade of India did not follow a straight and uniform path.

The volume of trade, prices and profitability

The statistical material available in the Company's account books enables us to quantify the market trends in European exports with great precision. The only unknown magnitudes are the quantities sent to Persia, for which no systematic and unbroken series can be constructed, as the Persian factories were subordinate to Surat and Bombay and their own separate account books have not survived. One of the conclusions which emerge from the analysis of the qualitative evidence is the cyclical nature of the Indian demand for the Company's commodity exports. This was particularly true of the woollen goods. Their use in horse and elephant furniture, tents, and house furnishings suggests a longer period of replacement than would have been the case if they were used primarily for clothing. Even without the random impact of events interrupting the flow of interregional trade, the duration pattern of broadcloth would have generated a discrete series and with it a dynamic oscillation. Such an effect could have been dampened only by a rapid growth in new demand relative to the demand for replacement. But it was beyond any doubt that the selling outlets in India or even in Asia as a whole were fairly narrow for Europeans woollens, which made the supplies very sensitive to the level of existing demand. The Court of Directors recognised this feature of the market when they stated in 1717, 'It has been generally observed that Europe goods do not go off well at least in quantities above once in two years. If that remark be well grounded and peace be restored we may hope another year may make amends for the disappointment of the last.'[67]

A comparison between the East India Company's broadcloth exports and those sent to the Middle East by the Levant merchants in the early eighteenth century may help to explain the sense of impatience and frustration felt by the Directorate at the failure of their servants to expand sales in the areas open to them. According to a document prepared by the Customs House in London, which gives the annual figures of woollen goods exported from England to the Mediterranean ports of the Ottoman Empire from 1720 to 1740, the yearly average for long cloth came to 11992 pieces.[68] For the same period the corresponding figure of the Company's broadcloth was only 5188 pieces. The contrast was all the more striking because the East India Company traded in areas that were from the geographical and demographic point much larger than those served by the Levant merchant, and of course the Middle East itself was open to the Company through the Persian Gulf and the Red Sea. One of the reasons for this relative failure can be attributed to a lack of sufficient incentive on the part of the servants in Asia to enlarge the market. They knew that the main profits of the East India

trade were derived from the imports. Any undue neglect of this side of the Company's business would very quickly bring the entire trade to a standstill and would eventually destroy their own financial survival. However, they were under no such compulsion in promoting and marketing the exports. Provided the sales showed a nominal profit and the stocks were cleared every few years, the factories in India or Persia had no real reason to be concerned at the small turnover.

At the same time it can be seen from the actual figures of the Company's commodity export that expansion did take place over the whole century of our study. This may have been a function of the increasing volume of imports as well as official pressure to export. But it is equally evident that the demand in India was not uniformly low all through the period. It was capable of rising or falling within fairly wide margins.[69] These periodical fluctuations posed a difficult decision-making problem for the Company at home. If the supplies sent out to Asia were not to become badly out of step with demand, some mechanism was needed to keep the Court informed of the market conditions. The main indicator used by the Company for this purpose was the level of stocks in the Asian settlements. Selling prices were an uncertain guide, at least in so far as the woollen goods were concerned.[70] Not only were they contract prices subject to the bargaining positions of the buyers and sellers, but at a time of falling demand even the most drastic price reductions might fail to clear the stocks. If the price fell below a certain threshold the Company's officials generally preferred to suspend sales for a time in the hope of the demand recovering later.[71] In such a situation it was vital that further supplies from England should be curtailed for a season.[72] To the Committee for Buying in London, reports of the inventory still remaining either in the Company's own warehouses or in those of the Indian merchants provided the best guidelines for future course of action.[73]

In terms of volume the principal landmarks in the history of the Company's export trade stand out clearly. The decade from 1660 to 1670 started off with very small commodity exports most of which were sent to the western side of India. With the Surat Factory taking 60-80 per cent of the total during the seventeenth century, the importance of the imperial port as an entrepôt for European imports was obvious enough. Even in the 1720s when the Factory had lost its pre-eminent position in the Company's overall trade, its share of the exports remained substantial, and the Court of Directors reminded the Bombay Council in 1725 that it was from that side of India the greatest volume of demand used to come in the past.[74] The proportion of the other two trading areas in India, the Coromandel coast and Bengal, were never very large, and the absolute quantities did not increase on any substantial scale till after the union of 1709. The inclusion of the exports intended for Persia of course

swelled the Surat invoices, but even without these re-exports it is probable that Surat would have taken a larger amount of woollen textiles, metals, and other goods than any other port in the subcontinent. The reports received from the Factory in the early 1660s about the sales prospects were highly encouraging and as a result the Company decided in 1663 to increase the quantities substantially.[75] However, the real expansion did not begin before 1670. In that year the Court of Committees received large indents from Surat and the news that some wealthy merchants in the city had actually contracted to buy the Company's goods in advance before the arrival of the ships, offering prices that showed a profit of 40 per cent on the invoice costs. The only point that could spell the need for caution came from the factory's explanation that the buyers had entered into the bargain not because of 'any advantage they could make by the sale of the goods, but partly emulation and chiefly in regard they both are prodigious moneyd men, who having alwayes vast treasure ready in house, do esteeme it safer invested in such solid unperishable commoditys, though they get but 4 and 6 per cent by them'.[76]

The pattern for the coming decades was now firmly established, though the war with the Mughal Empire temporarily closed the main markets in India in the late 1680s. The volume of exports responded quickly to favourable orders from the factors. When the demand was saturated a dramatic decline followed swiftly. The irregularly patterned cycles lasted from three to five years. Because of the time-lag the periods of brisk trading in India did not always coincide with the periods of high exports. The continual disequilibrium between the supplies and demand caused untold complications, especially because the woollen goods could not be stored for more than a year or so without suffering serious deterioration.[77] The elaborate and rational calculations that commonly accompanied the deliberations in the Company's council chambers in India and in London were being constantly put at risk by the physical constraints in the information and transport system. The actual peaks and troughs in the volume of trade are very clear from the statistical figures. For four years from 1675 to 1678 the exports continued to be large. These were followed by two years of relative decline, broken by the sharp recovery of 1681-2.[78] For the rest of the century there were three comparable cycles with the peak years occurring in 1686, 1694, and 1699. However, the amplitudes were not the same in each case. If the total amount of broadcloth exported is taken as an index of the general fluctuations, it can be seen that the peak in 1676 consisted of 3157 pieces. In 1682 it was 4696 pieces, in 1686 3670, in 1694 8666, and finally in 1699 5715 pieces. The increase in the last decade reflects the new elements that had appeared in the Company's commercial decisions in the form of the statutory obligation to export a minimum quan-

tity of English manufactures and also its policy of entering the Persian market through the joint venture with the Armenians.

During the first half of the next century the upward trend in the average volume of exports continued, but there are some gaps in the list of items. Coral and quicksilver disappear altogether.[79] Ivory had been exported sporadically even in the seventeenth century. It reappears in 1729 and from 1734 it was once again regularly sent to western India. In some years its value was quite considerable, though in general it accounted for only 5 per cent of the total value of exports to Bombay. In order of importance the main commodities were now broadcloth, new draperies, copper, iron and lead. Trade was still characterised by the usual ebb and flow. From 1709 to 1713 the quantities of nearly all the items of export were exceptionally large. In 1711 alone 11046 pieces of broadcloth and 6077 pieces of new draperies were exported. This was a period, the closing years of the War of the Spanish Succession, when shortage of bullion and adverse public opinion at home were forcing the East India Company once again to pay greater attention to its export business.[80] The supplies to Surat and Persia the Court deliberately inflated beyond the amounts asked for, hoping that the small quantities sent in the past few years would have cleared the stocks and revived demand.[81] The Company's optimism in regard to the Surat and Persian markets was matched by similar hopeful prospects in Madras and Bengal. Sales had been good in both the areas and high profits were being made.[82] Exports to Madras for the first time exceeded 1000 pieces of broadcloth in 1708. Four years later the quantities sent to southern India were 2093 pieces, while Bengal took 1633 pieces. 'We have this year enlarged the quantity of cloth,' the Court informed Fort St George in 1711, 'both to the Coast and Bay finding by your advices a demand for it and that it sold very well.'[83]

Indian demand for European commodities appears to have undergone a structural shift in the early decades of the eighteenth century. Though still subject to intermittent depressions in trade, the Company's exports now displayed a level of profits that was rarely equalled in the earlier ages. It was not unusual for the Indian market to yield upwards of 100 per cent on cloth sales, when Persian factories returned barely 6 to 10 per cent.[84] Could it be that after more than a century of trading with Europe, Indian people were beginning to change their preferences ? If true, this would apply to the use of only woollen textiles, as the metal goods were merely the raw materials for final industrial products. Another possible explanation of both the increased sales and the margin of profit may lie in the methods of marketing. The Indian factories were increasingly turning to the practice of selling the commodities in bulk either to a single merchant or a group of traders such as the Madras joint-stock merchants. The main attraction of bulk, contract selling was

in quick turnover, and the Indian merchants were certainly regarded as superior in retailing the goods in small quantities, as they had a much closer knowledge of the local market conditions than the Company's servants.[85] However, in the eyes of the Directors in England the priorities were, first, to clear the warehouses of the current stocks, so as to leave the market clear for the next season's supplies, and, secondly, to get a good price for them. The second condition could be relaxed if the elasticity of demand seemed high enough to bring about a proportionately larger volume of sales.[86]

The better documentation of the Company's later records enables us to reconstruct the precise extent of the gross profits on the Indian sales of the export goods. The Bombay Council estimated in 1715 that their cloth was sold at 80-130 per cent advance on the invoice price as against 45 per cent in Madras.[87] More cloth could be sold if the price was lowered. But, for reasons never made quite clear, the Bombay officials were opposed to the idea of a price reduction, arguing that once the price was lowered it could not be raised again very easily.[88] This was a curious line of reasoning and not accepted as valid by the Court of Directors. If the woollen goods were no more subject to damage than lead, some claims might be made for keeping them unsold. The Council should have considered, the Company pointed out in 1716, that while the cloth lay decaying in the warehouse there was no financial return on the money invested in it, a loss that may amount to as much as the entire prime cost. 'Nor doth it necessarily follow,' the Court thought, 'that the price cannot be raised again, for as the demand is so will the price be.'[89] While the Bombay servants were being censured for attempting to keep up the price and restricting the sales, Madras was criticised a few years later for following an opposite policy. Between 1710 and 1715 broadcloth had been sold to the joint-stock merchants at an advance varying from 55 to 45 per cent. But in 1717k was reduced to 30 per cent in order to clear the rapidly accumulating stocks which amounted to nearly 1000 bales.[90] When the Company heard of this, the Directors seem to have forgotten all previous references to the price elasticity of demand. For they wrote to Fort St George, 'We think that you cannot be ignorant [that] whether our Woollen Goods sell cheap or dear the Consumption is very near the same in all part of the Mogull's Dominions. If so, should it not be then your care to keep up the price ?' The effect of selling the cloth and lead at so cheap a price was to depress the markets as far away as Surat and Bengal.[91]

The transhipment of European goods from one Indian port to another was beginning to emerge as a serious problem in the Company's selling policy. Quite often the contracts contained a clause protecting the buyers against immediate future sales.[92] But if the Company could not prevent the goods sold from being switched from one market to another,

Table A.g. *The price of English broadcloth in Bengal (per piece)*

	Broadcloth ordinary			Broadcloth aurora		
Year	Invoice price Rs	Sale price Rs	Profit /o	Invoice price Rs	Sale price Rs	Profit %
1710	36	70	94	57	84	47
1711	37	70	89	55	103	90
1712	37	70	89	55	109	99
1713	36	70	94	62	108	74
1714	37	4i	11	88	86	loss
1715	40	70	75	54	109	102
1716	41	60	45	60	120	100
1717	37	60	62	60	120	100
1718	42	49	19	64	78	21
1719	41	60	46	59	–	—
1720	42	60	43	63	–	—
1721	4i	–	—	61	no	80
1722	40	60	50	61	no	80
1723	39	60	54	57	no	93
1724	39	60	53	57	no	93
1725	40	60	50	56	no	96
1726	37	60	62	56	no	96
1727	36	63	74	56	"5	105
1728	37	62	65	55	123	124
1729	37	55	49	55	100	82
1730	37	49	33	56	79	41
i73i	38	55	45	55	95	73
1732	38	55	45	50	95	90
1733	38	55	45	55	79	43
1734	41	5i	25	53	80	5i
1735	4i	43	5	56	80	43
1736	38	55	43	53	90	70
1737	37	58	56	53	95	79
1738	38	60	58	60	95	58
1739	37	60	60	5i	82	61
1740	38	5i	33	50	78	56
1741	36	44	20	52	77	48
1742	37	53	42	5i	103	103
1743	34	49	45	5i	79	56
1744	36	52	43	49	80	62
1745	40	47	18	52	79	5i
1746	40	46	14	53	65	23
1747	41	47	15	52	86	65
1748	45	47	4	53	79	50
1749	4i	53	29	52	75	45
1750	40	48	20	5i	89	75
I75i	39	53	35	5i	9i	78
1752	40	5i	27	53	85	61
1753	41	48	16	53	67	27
1754	40	49	22	57	57	00
1755	40	49	22	52	60	17
1758	38	49	28	48	75	56
1759	38	60	58	5i	84	65
1760	43	35	loss	55	75	36

Sources. India Office Records, East India Company, Bengal General Journals and Ledgers, Range 174, vols. 70-108, Range 175, vols. 1-68. (All figures have been rounded.)

such guarantees obviously lost all commercial value. The chief target of transhipment appears to have been Bengal. As we can see from Table A.9 the region offered high margins of profit in the early years of the eighteenth century. In 1713 the Madras Council predicted that the wealth of the province together with the low cost of transport by water to northern India should make Bengal a much more attractive market than the coast of Coromandel with its hot and sultry climate. In the previous season the Armenians alone had transhipped 100 bales of broadcloth, originally imported by the English East India Company, from Persia to Bengal. Rustumji Monackji, the Surat broker, had also sent a similar amount and sold the cloth at a discount of 25 per cent.[93] These indirect imports into Bengal naturally provoked the Company's buyers in Calcutta to make vigorous protests. It was emphasised that the cloth was sold in Bengal at twice the profit made in Madras. Unless the transhipment stopped, a valuable market was likely to depreciate.[94] However, the traffic was not entirely in one direction. In 1714, as if to make things awkward for the Surat Factory deliberately, Varanasidas Seth, the Company's broker in Bengal and the chief buyer of its broadcloth, sent 80 bales to Surat; a measure that infuriated the English Council there, already struggling to clear their own stocks.[95]

The Court of Directors were inclined to treat at least the Surat Factory's complaint of meeting strong competition from imports brought from Mokha, Persia, Madras, and Bengal as an exaggeration.[96] With an active coastal and interregional trade in India, movements of goods could be expected to respond to market conditions and price inequalities. It is possible that the condition of oversupply which was a constant feature of the trade in European goods encouraged rash commercial speculation. But in spite of occasional bad years the price of broadcloth stayed high in Bengal until 1730 after which there were much greater year-to-year variations in both the selling prices and the advance on invoice costs. The instability of the Surat and the Coromandel markets in the 1720s and 1730s compelled the Company to keep up the supplies to Bengal, though in point of absolute quantities the exports to Calcutta were smaller than those sent to the other two areas. However, from 1741 there was a general expansion in the volume of the Company's commodity exports which lasted until the end of our period. Cloth exports to all the three trading areas in India showed a sudden increase in 1741. The recovery of demand in Surat was particularly strong. The sale of the Company's woollens, copper, lead, and ivory was so good in 1742 that the Court decided to make a large increase in the shipment of all these items in the following year.[97] The main reason for the expansion came from the expectation of high profits to be earned during war-time shortages.[98] The supplies of broadcloth to Bombay exceeded the indents in 1753 by almost 600 bales as a result of the reports of the high prices

which woollen goods were fetching in Surat." A year later the members of the Court again confirmed the policy of expansion when they wrote to Bombay, 'We shall pursue our scheme of exporting as large quantities of woollen goods as can be vended at the several markets in India with the utmost vigour.'[100] The volume of exports to Bombay was matched by similar increases in Madras and Calcutta. The expansion of the Company's standing army in these areas, which followed the outbreak of Anglo-French wars, created a new source of demand; but there was no marked rise in the selling price of broadcloth in Bengal. In fact the Court of Directors noted with concern in 1757 the sluggish sale of woollen goods, though in the following year prices were good in Bengal. The general increase in the total value of the Company's exports in the last decade of our study was partly the result of its determination to push the sale of European goods in western India, so as to compensate for the losses on the imports, and partly because of a genuine improvement in demand which lasted from the late 1740s to the early 1750s.[101]

II
THE COMPANY AND THE INDIAN TEXTILE INDUSTRY

Advantage in comparative costs

Before the discovery of machine spinning and weaving in Britain in the second half of the eighteenth century, the Indian subcontinent was probably the world's greatest producer of cotton textiles. The overseas markets in Asia and Africa were of course long dominated by Indian products, and to the demands of these two continents Europe added its own in the seventeenth and eighteenth centuries. While hand weaving of cotton goods was indigenous to most countries which had access to local supplies of raw materials, the finer and luxury fabrics were a special feature of the Indian production. Even as late as 1772 Henry Pattullo in the course of his comments on the economic resources of Bengal could claim confidently that the demand for its textile manufactures could never lessen because no other nation on the globe could either equal or rival their quality.[1] This observation does not prove conclusively that the contemporary writers attributed India's supremacy in textile industry to the mastery over problems of technology, but it reveals at least a widespread awareness of the unique position of the Indian products and the role played by manufacturing quality in the world demand for these textile goods. While Pattullo put his emphasis on technological skills, an earlier writer had stressed lower production costs in India. That international trade was, among other things, a function of price differentials was a view put forward in most succinct terms by the author of an anonymous tract printed in 1701. 'The cheapest things are ever bought in India,' the pamphlet stated, 'as much Labour or Manufacture may be had there for two Pence, as in *England* for a shilling. The Carriage thence is dear, the Customs are high, the Merchant has great gains, and so has the retailer; yet still with all this Charge, the *Indian* are a great deal cheaper than equal English Manufactures. Every man will buy the best Pennyworth; if this is to be had from India bullion will be carried thither.'[2] The analysis here was very close to the theory of comparative costs as developed by Ricardo a century later, as the author of the tract ascribed the difference in international production costs to the inequality of factor prices. 'The Labour

here in *England* bears proportion to the Wages that are given for it, it must be measured by the price, so that Labour of less price must be accounted less Labour; *Indian* Manufactures are procured by Labour of less price, and therefore by less Labour than equal *English* Manufactures.'[3]

Not enough evidence is available to determine with any certainty whether it was purely monetary factors or the difference in productivity that accounted for the disparity in the price structure between Asia and Europe during this period. For price differentials in individual items of imports, particularly textiles, the level of the technology in the respective Asian and European economies was obviously significant. The tract of 1701, for example, pointed out that the freight costs of transporting raw cotton were equal to those for the finished cloth, and yet it was not economic to manufacture the latter in England since English labour was a great deal dearer than Indian.[4] It is perhaps not entirely a chance occurrence that the large-scale application of machinery to the production process happened in the textile industry in England, and it seems reasonable to infer that the Indian imports served to map the demand conditions for English entrepreneurs once the problems of technology were solved. There were certainly many plans for the creation of a cotton textile industry in England during this period. The proposal of John Barkstead in 1691 for the incorporation of a company manufacturing calicoes was followed three decades later by other memorials, addressed to the Board of Trade, emphasising the benefits which the country could expect by substituting domestic production for the Indian imports. None of these early projects ever went beyond the stage of mere suggestions on paper and their originators, it has been stressed, came from groups outside the cotton trade.[5]

It is difficult to avoid the conclusion that the success of the Indian cotton industry in maintaining its existing overseas markets and in creating new ones in the West before the period of the Industrial Revolution owed as much to the possession of highly specialised technical skills in manufacturing as to lower costs of production. The weaving of cotton was not merely a question of assembling the necessary raw materials and setting the unemployed poor to work, as many of the early projectors in Europe imagined. The cotton industry in addition called for an empirical knowledge of the preparation and treatment of the natural fibre before it could be made ready for weaving. As we shall see later, the production and treatment of thread was a key element in the successful manufacture of the finer types of textiles and often required as much time as the actual process of weaving itself. Before the invention of machine spinning, hand spinners in Europe could seldom equal the quality of Indian yarn, and the textile fabrics utilising cotton were, in Europe, widely woven with thread imported from India.[6] The prohibi-

tion laws enacted in the early part of the eighteenth century and directed against the wearing of cotton materials probably also discouraged any idea of importing technical knowledge from abroad. Finally there was the fact that businessmen engaged in the cotton trade had already a deep vested interest in importing and distributing cotton textiles from cheap producing areas, on commercial terms that ensured to them semi-monopoly profits. India thus possessed two major advantages. In locally produced raw material and human capital she had natural endowments which gave her cotton industry a distinct lead in costs. Measured in money terms the labour inputs also effected substantial savings when compared to the costs of production in an equivalent industry in Europe. It was this price differential which enabled the East India Company to maintain a mark-up on the unit cost of its textile imports in the ratio of two to one.

Although the cotton textile industry was of such obvious importance to the economy of India in general, there are few studies that attempt to analyse its structure and development. It is clear from the records of the European trading companies that the industry did not exist in an unchanging state and that there were varying responses of the different regions in India to shifts in demand and other external conditions. The subcontinent was not geographically or even administratively a homogeneous area and it was to be expected that the fortunes of the textile industry would be tied to the condition of regional agriculture, density of population, transport facilities, and the quality of political rule. It is admittedly a formidable task to undertake an analysis of the industry in the seventeenth and eighteenth centuries from European sources alone. But sufficient information is available in them to enable us to present an outline, even though not all questions can be answered in depth. The main concern of the European buyers was naturally centred on securing enough quantities to supply the export markets. They were less interested in the internal organisation of the textile industry, except where its ramifications touched on the smooth conduct of the trade. Fortunately for the historian occasions were not lacking when a shortfall in supplies, or a sustained rise in cost prices could only be explained to the authorities in Europe by taking into account the details and state of the industry. A perennial problem arose from the effort to locate and develop centres of production on the principle of least cost. If the overall effect of the new demand from the West was to lead to an expansion of India's textile industry, at the regional level its impact was to bring into prominence new areas of weaving. As the Company's search for cotton piece goods shifted from western India, to southern, and eventually to Bengal, it provoked a great deal of discussion on the relative merits of each producing area, which throws much light on a whole range of related problems, the relationship between commercial capital and the

producers, the remuneration and wages of labour, the supply of raw cotton and yarn, and the standardisation, finishing, and the design of the products.

The location and changes in the geographical distribution of the textile industry

In attempting to explain the extensive presence and the economic importance of the textile manufactures in Goromandel and Bengal, Robert Orme, the eighteenth-century historian of the Company, put forward the novel suggestion that it was because of the low physical strength of the inhabitants, as weaving was a sedentary occupation and required the minimum possible exertion.[7] Orme did not choose to dwell on the contradiction which his theory created in explaining the widespread existence of the industry among the martial races of India, in Rajasthan, Punjab and the Gangetic plains.[8] It may seem strange that he should have overlooked something that was clear to most of the Company's servants in charge of the textile trade, that the cotton industry in India was organised on the basis of caste groups which were to be found in all parts of the country and that its diffusion had little connection with the specific genetic characteristics of the people.[9] But the question raised by Orme still stands. If there is a distinct pattern of regional specialisation and systematic configurations of economic advantages in spatial terms, these must be identified and accounted for in the light of a unified theory. Such an abstraction can be attempted both from observed historical facts and the assumptions of rational criteria on the part of the decision units. The theory of industrial location takes into account the competition in space among the users of the various factors of production. The relevant variables affecting the decisions of the users can be climatic and geographical features, availability of raw materials, access to markets, transport costs, and the scale of output. To these internal considerations the historian must add the influence of external and often random elements, such as social values and political events. The complexity created by the latter arises from the fact that the forms of the institutional environment are not predictable and changes in their shape are a function of time. These pre-determined variables can of course seriously constrain the rationality of choice stemming from the evaluation of the economic considerations alone. The result of the interaction between these two different types of variables might easily be expressed in a situation in which the spatial distribution of economic activities at first sight appears to be random and arbitrary, but which on closer inspection can be shown to contain many of the systematic features.

The history of the Indian cotton industry in our period furnishes many examples of the above hypothesis. The most striking thing about

the manufacture of cotton goods was its extraordinary diffusion throughout the country. There were few villages and towns in Coromandel and Bengal, as Orme aptly observed, where at least a few families of weavers could not be found. A similar observation could also have been made about western and northern India, but the wide dispersion of the industry should not be allowed to mask the vital qualitative difference between production for a purely local market and production for export and interregional trade. Cloth intended for local consumption needed few considerations other than an adequate supply of raw cotton or yarn. In the case of the export markets the problems of distance directly entered into the question of profitability. The merchant trading overseas has to take into account not only the cost of transport between the producing and the consuming regions but also between the centres manufacturing the export goods and the final point of shipment. The location and the scale of production mattered to him because of important economies of concentration. Under Indian conditions weavers had to be supplied with working capital and its cost was likely to be tied in inverse proportion to the credit-standing of the workers. The merchant or his agent was also responsible for organising proper inspection of the finished goods and ensure that their quality came up to the right specifications. Distance obviously conditioned the efficiency of such operations, which in its turn had direct cost implications. Contemporaneous sources, both European and Indian, leave no room for doubt about the extent of regional specialisation based on product differentiation as well as market orientation.

The general picture regarding the location of the cotton handloom industry was clear enough. Within India a substantial inter-provincial trade had developed, based on fine textiles which were supplied from special centres. The muslins from the Dacca district in eastern Bengal had their counterpart in the silk goods and taffetas of Kasimbazar. Towns in western and central India, such as Ahmedabad and Sironj, provided fine embroidered quilts, satins, chintz, and the famous transparent muslin known as *ab-i-ravan* or flowing water.[10] The location of these centres was probably neutral with respect to transport costs, as the goods were mostly high-cost luxury products consumed in the richer households and the charges for carriage were not likely to make a significant difference to their sales. The spatial pattern in the manufacture of these fabrics must be explained on the ground of special geographical features and the cumulative effect created by a hereditary concentration of craft skills.

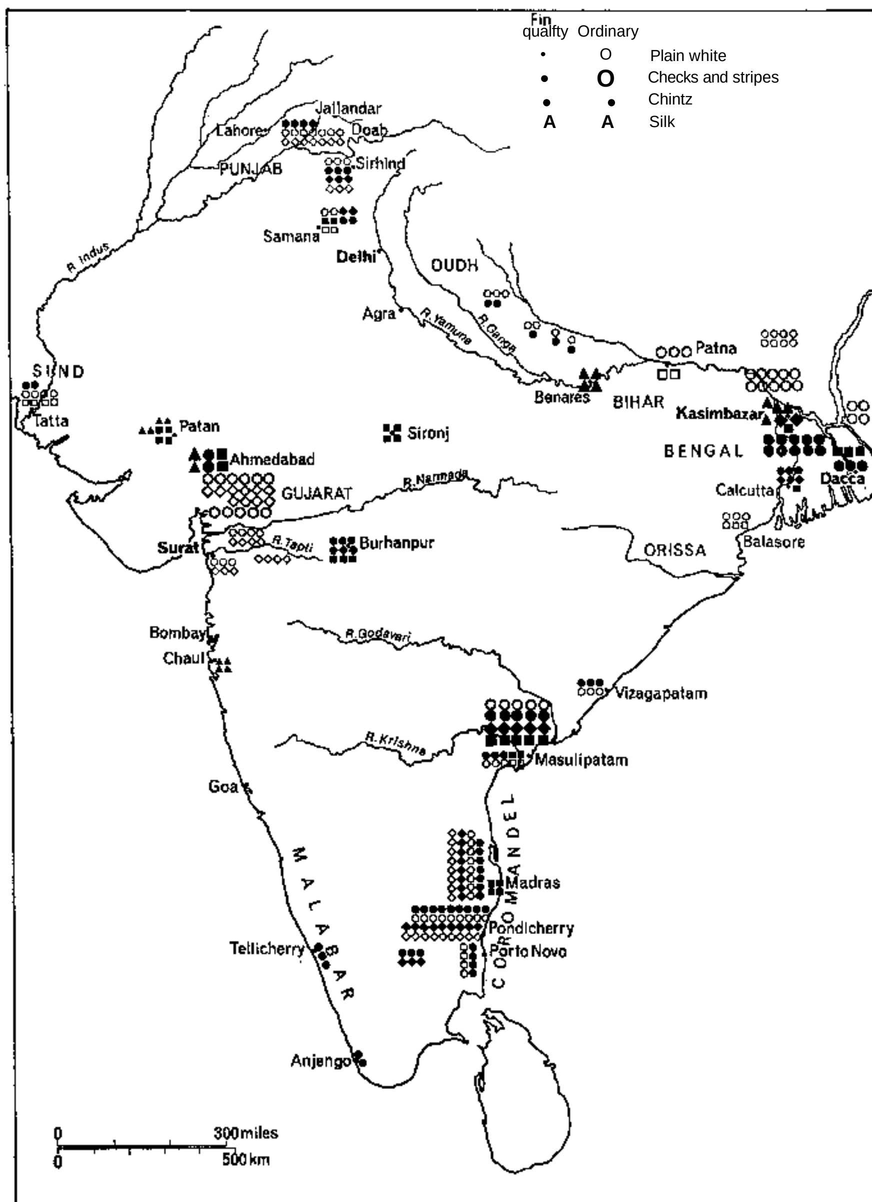
In the case of Dacca and Kasimbazar an important encouragement to specialisation was to be found in their proximity to the supply of suitable raw materials. The quality of the Dacca muslins in our period resulted in great measure from the quality of the raw cotton grown in the area.[11]

A highly skilled labour force composed of spinners, weavers, and finishers had grown up around the provincial capital, out of the chance discovery that the soil in the surrounding area was capable of growing a particularly fine variety of cotton. When competition of machine-made yarn destroyed the spinning industry in the nineteenth century, the handloom weaving was able to survive by drawing on the nucleus of craftsmen already there, substituting foreign yarn for the domestic. The silk industry of Kasimbazar shared Dacca's locational advantages. Much of the industry's success rested on the semi-monopoly held by northern Bengal in the production of raw silk, and the mulberry plantations in the vicinity of Kasimbazar were specially singled out for comment by the European visitors to the district.[12] Similar arguments could be applied to account for the specialisation found in other centres. Tavernier ascribed the superiority of Sironj chintz, its lively colours and fastness, to the river which passed through the town, the water of which, according to him, 'possesses the property of giving this brightness to the colours'.[13] This was a contemporaneous belief that was echoed in the Court of Committees' own observation in 1696 that the water of Madras was not to be compared to that of the places around Masulipatam in producing bright and durable colours in the painted cotton goods.[14] The chemical interaction between the minerals contained in the water of a particular place and the various dyestuffs was undoubtedly an important explanation of why certain towns and villages were able to produce textiles, involving dye-fixing techniques, of a better quality than others. The Krishna-Godavari delta in addition grew the best kind of chay-root, which was used for the red dye.[15] Technical considerations such as these were reinforced in every case by commercial forces. It is obvious that areas of special textile manufactures like Dacca and Masulipatam had expanded their production on the principle of 'urban conglomeration'. An initial spatial advantage had brought together a whole range of associated and complementary industrial skills. But the areas were identified by their products and not by markets. The consumers of the Dacca muslin were completely dispersed in space and the locations of markets had no special economic significance from the point of view of the producers.

However, it should be noted that apart from the supply of raw materials or particular problems in manufacturing technique there was no compelling practical or theoretical reason why a centre based on product differentiation should be either a locus or a region in space. Ahmedabad and Sironj were towns, while textiles from Dacca and Masulipatam were regional.[16] It is possible to distinguish another type of industrial location in India for cotton textiles, the chief determinant of which was the market area. The theory of market areas at an abstract level can be expressed as a problem in determining the boundary lines

of an economic region. If the locations of producers are taken as fixed, then the distributors or the consumers of their products are faced with a choice of other areas from which supplies can be drawn. Conversely if an industry is spatially mobile and its market area fixed, it is the producers who are given the choice of location. In either case the effect of the market orientation would tend to create distinct industrial zones or clusters of discrete points in space. For such a theory to be valid, several key assumptions are required. The first and foremost is the notion that products are highly interchangeable and that consumers' preferences are not significantly affected by variations in the quality or other specifications. Another assumption is that transport costs rise monotonically with distance. Finally, it must be assumed that there is uniformity of prices and absence of discriminatory treatment leading to freight absorption by the seller. Optimal conditions are obtained when transport costs between the market and the points of production are jointly minimised. The theoretical restrictions imposed by the simplifying assumptions have the merit of making the model mathematically elegant, but at some cost to reality. Historically not many actual situations can be found that would satisfy the model in every respect. Nevertheless, clearly recognisable areas of textile production were to be found in Mughal India that were distinguishable from one another by their markets.

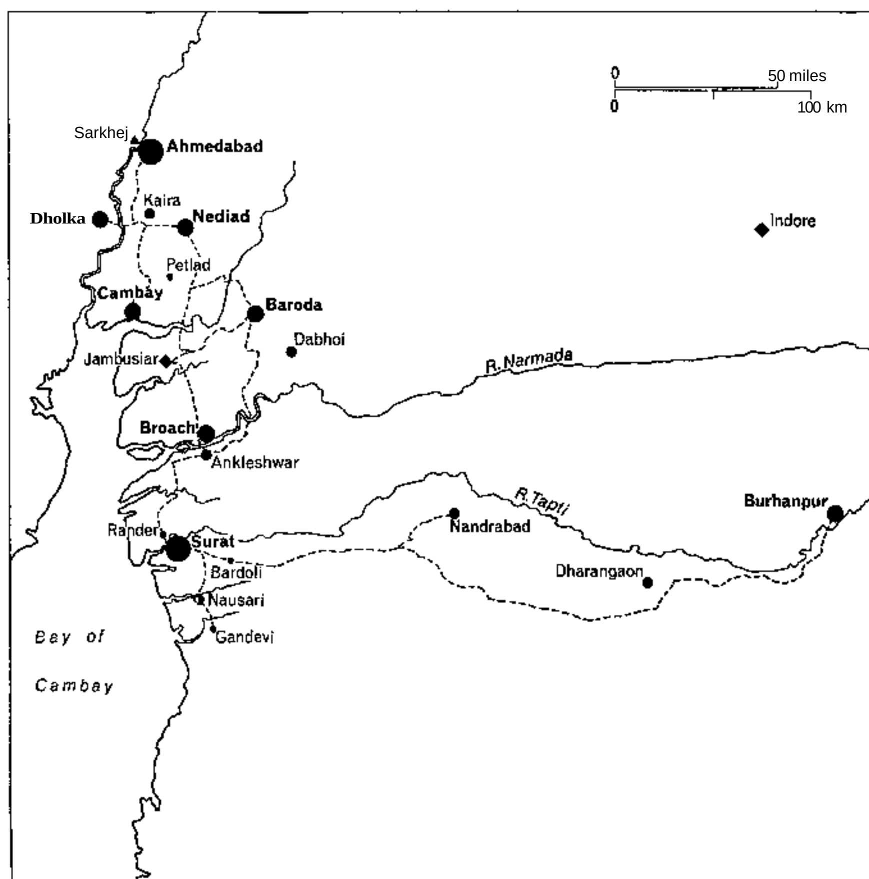
The four great industrial regions in India specialising in the manufacture of cotton goods for export were the Punjab, Gujarat, the coast of Coromandel and Bengal. Major textile centres had emerged in the Punjab in response to export demands.[17] The Punjab weavers had two main outlets for their products. One was the overland trade with the markets of Afghanistan, eastern Persia and Central Asia; the other the riverborne traffic to the ports of Sind which exported the goods to Maskat, Kung, and Basra. In the course of a journey from Agra to Tatta in Sind undertaken in 1639, Henry Bornford wrote a lengthy report which provides much detailed information on the location and routes of the cotton trade. The white cloth woven in Panipat, for example, was sent to Sirhind or Lahore for sale, while the products from the famous calico town of Samana were directly exported to Isfahan and its adjacent markets, by the Persians and the Armenians, through Kandahar. The fine textiles from the Jalandhar *doab* were marketed through Lahore which Bornford described as 'the prime citty of traffick in India', pointing out that 'all commodities of the adjacent places being brought hither and are bought by the Uzbegs or Tartarrs and so transported by Cabull into those parts'.[18] From the careful way Bornford kept a record of freight charges between the various important places of trade, it is clear that transport costs were a vital consideration in determining the flow of trade.[19] It is evident also that the Punjab served those inland areas of



India: main textile weaving areas 1600-1750.

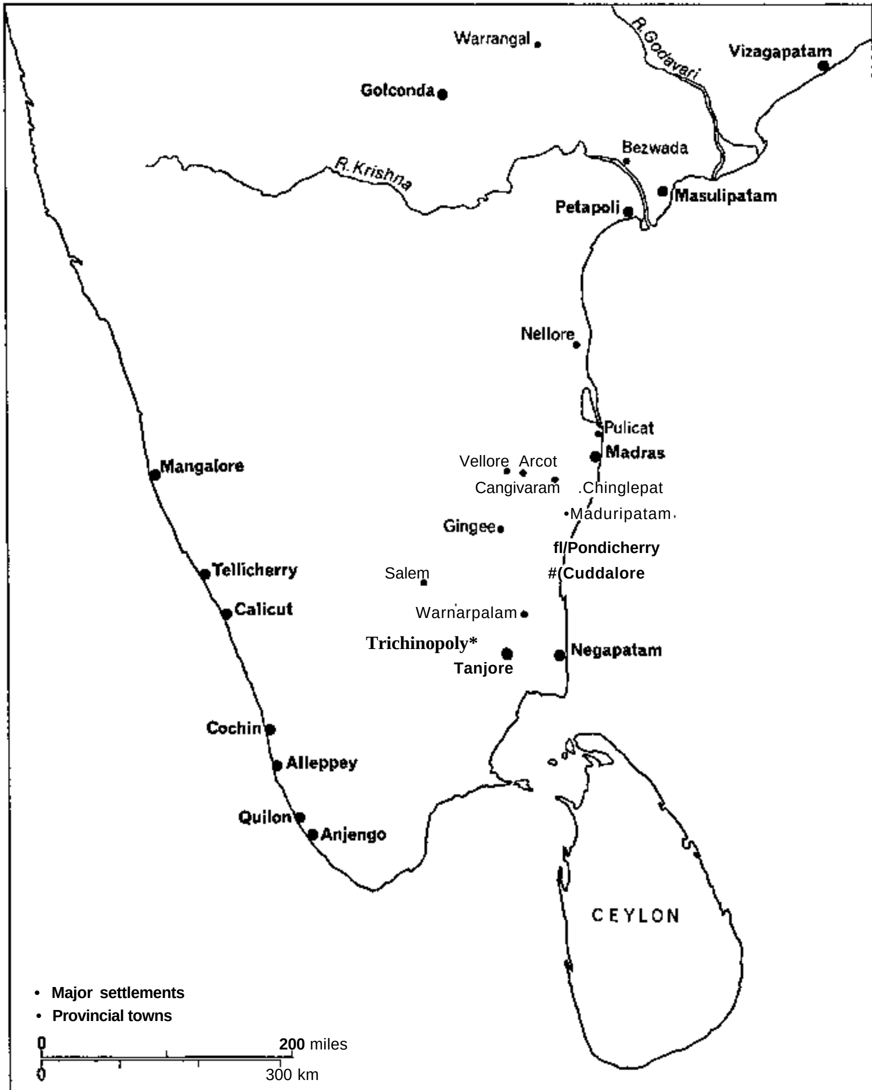
India's Near Eastern market which could not be reached economically from the textile towns of Gujarat. For there can be little doubt that the latter's industrial pre-eminence and prosperity were founded on its ability to supply the Red Sea ports with textiles at a cost lower than any other region in India. It is true that the Coromandel coast also had a certain amount of trade with Mokha and the fine muslins of Bengal were sold extensively in the Persian Gulf.[20] But compared with Gujarat the Red Sea trade of these two latter provinces was significantly smaller.

Lack of data makes it difficult to make a precise quantitative estimate of the relative volume of textile exports from Gujarat, the Goromandel coast, and Bengal to the Red Sea and Persian Gulf. The descriptive material available indicates that the volume of textiles carried to these areas from western India was very large. The East India Company's



Gujarat: textile towns *c.* 1700.

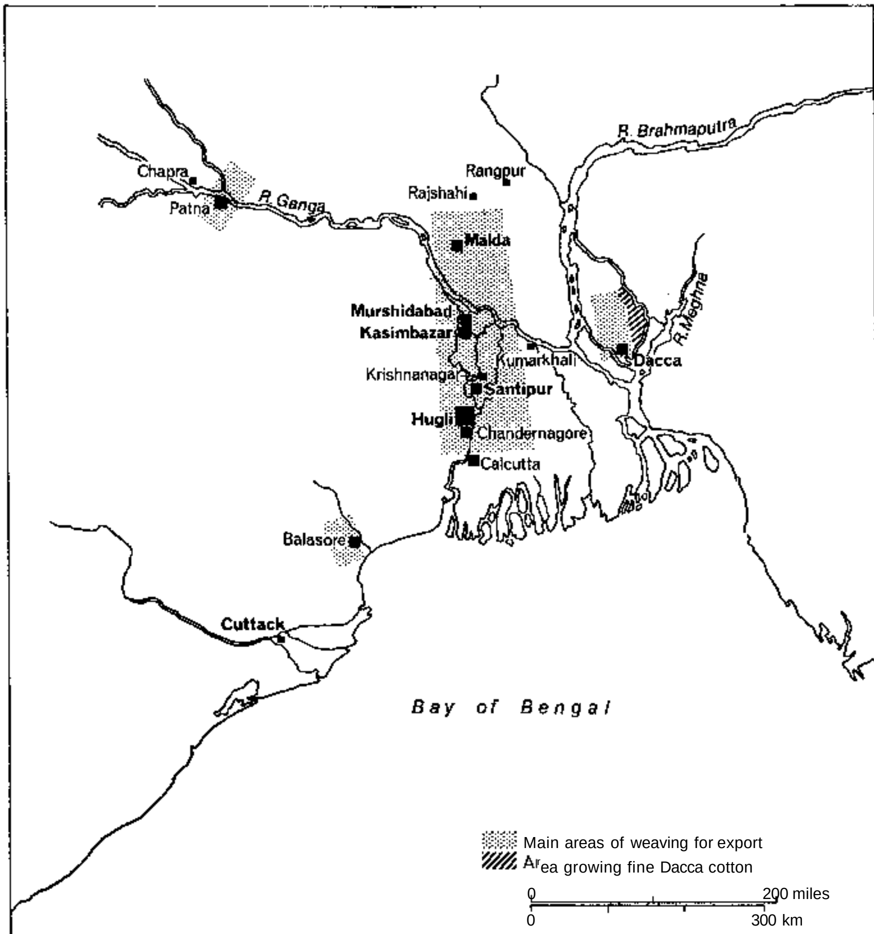
officials often drew attention to Gujarat's economic dependence on the Middle East as a policy instrument in putting political pressure on the Mughal government. In 1690 after the end of the Company's Mughal war, Sir Josia Child and his fellow Directors reflected that the newly concluded peace was likely to last in India because the Indian emperor derived more revenue from the manufactures on his land than any other prince on the face of the earth and that it could give him no plea-



South India: weaving areas *c.* 1720.

sure to see his subjects starve for want of employment, as they must inevitably do if the war continued, because it was in the Company's power to interrupt his trade 'to the Red Sea and that of the Armenians, Persians, Arabians, Kurds, and other people of Bussora etc which usually carryed off five times as many Callicoes as we and the Dutch'.[21] One of the best indications of a region's industrial ties to a particular market area is the degree to which producers adjust their products to suit the consumer tastes. There is ample evidence that the Gujarat weavers had fully adopted their manufacturing techniques and the fabrics to the needs of the Middle Eastern buyers. To take only one example, in 1664 the Surat Factory reported that cotton cloth intended for the markets of Persia, Basra, and Mokha would not sell there unless they were starched and glazed as smooth as paper. The weavers were reluctant to alter the looms to the requirements of the European companies as they were fully employed in 'weaving sundry sorts of goods for the marketts of Mocha, Persia, Bussorah, Atchin etc'.[22] Just as western India looked to market areas nearer to itself for the disposing of the bulk of its cotton goods, so the main weaving regions of south India traditionally relied on the trade with South East Asia for their overseas outlet. The strong commercial links between the port of Masulipatam and the islands of the eastern archipelago certainly contributed to the region's supremacy in cotton textiles, and production in the south was just as much oriented to consumer preferences as it was in Gujarat.[23]

Regional specialisation based on the buyers' taste of course weakens the assumption that transport costs determine the boundary of market areas. It can be argued that the design and the style of the fabrics could be altered if it was economic to trade with certain regions. Where specialisation took place within a range of products as opposed to one particular type, it was likely to have occurred after trading relations had been established. The response of the Indian textile industry to the demand from Europe provides a good illustration.[24] The best example perhaps comes from Bengal. Before the arrival of Europeans in the area, Bengal's main market appears to have been in Upper India, the easy access to which was provided by the great rivers flowing down to the sea from the north. The development of European trade with Bengal in the late seventeenth century had the effect of shifting the balance radically in favour of the seaborne trade. During the first half of the eighteenth century Europe was unquestionably Bengal's chief trading partner, and its textile industry had not only expanded at a rapid rate to keep pace with the increased demand but had also fully adjusted its output to the special specifications required for selling in Europe. Bengal's locational advantages were attributed by contemporary writers to both the lower cost of water transport and the productivity of its agriculture. Adam Smith saw Bengal as an area that was able to support a



Bengal: main textile towns *c.* 1720.

substantial industry because of an extensive home market based upon inland navigation.[25] In 1718 the Court of Directors was writing to Bengal that it was 'a common practice at Surat when the Brokers were to buy for us the several sorts of goods we wrote for to send their under Brokers to Agra, Ahmadavad, Sindh, and many other widely distant places where they were made to bespeak and bring them down to Surat at the best hand. It is strange the same cannot be done by you especially considering on the Surat side they have not always the conveniency of water carriage as you have from Patna'.[26] The theory that differences in labour costs were caused by price differentials in agricultural commodities, which enabled workers to maintain equality of real wages, was frequently applied to Bengal. In 1661, in reply to a suggestion made

by the Court for making Bengal taffetas in Madras, the Council commented, 'Neither may you ever expect the commodity can be made here to be afforded as reasonably as in Bengalah; for all provisions of victual, when at the cheapest, is here three times dearer than in Cassambazar and Huighly, where these taffetas are made, and consequently the weavers and other workmen employed therein can maintaine themselves at two-third lesse than those that shalbee employed in this your towne.'[27] Similar views on the productive capacity of Bengal and its comparative advantage in costs continued to echo during the next few decades, though it is difficult to see how the Company could have made an exact comparison between Bengal and other areas in India as the quality of Bengal goods was generally higher than that of textiles exported from Madras and Gujarat.[28]

There were certain economic features common to all four industrial regions. Active interregional or foreign trade was one. The other elements included the presence of an enterprising business class, sources of raw cotton, ample supply of labour, and the ability to create an agricultural surplus. The argument that these were separate spatial entities created by the forces of market areas is not unduly weakened by the obvious exceptions. We have already noted the Red Sea trade of the Coromandel and Bengal. Surat textiles were similarly sold in Bantam and Achin. Cross-haulage of an identical group of products can take place if there is freight absorption by the sellers or if transport costs are distributed over a number of different trading commodities with varying levels of profits. The Surat merchants may have found it highly profitable to import spices, sandalwood and tin from the Indonesian archipelago, and rather than have their ships sail empty, loaded only with silver, allowed them to carry a few bales of Gujarat textiles. It is well known that Bengal exported large quantities of foodstuffs, raw silk, and fine muslins to Surat. The commodities brought back by the ships were tobacco and raw cotton. Micro-economic considerations always qualified the predominant product-mix of a particular region's long-distance trade.

However, an examination of the dispersion pattern of the cotton industry within the regions reveals certain important dissimilarities. In western and northern India weavers producing for the export markets were either urban-based or situated close to the main cities. Every provincial capital had a sizable population of cotton weavers.[29] Surat was the metropolitan market of three small weaving towns within a distance radius of 20 miles - Bardoli, Nausari and Gandevi.[30] The other major textile centres of Gujarat, such as Anklesvar, Broach, Dabboi, Baroda, Nediad, Dholka, and Ahmedabad, were all urban and located close to the main caravan route to Delhi and Agra.[31] In Bengal and the Coromandel coast the industry appears to have been much more scattered

and it was to be found both in town and country. The urban gravitation of the weavers is not difficult to explain: towns in India, particularly if they were government or administrative seats, had considerable consumption needs. Bernier noted with some amazement that Delhi, the imperial capital, never contained less than 35000 troops, and he conceded reluctantly that the population of the city, though not exceeding that of Paris, the nursery of the world, could not be greatly less.[32] The clothing needs of such concentrations of population must have been an important source of employment for the urban weavers. Other possible explanations for the difference between the two regional types may be sought in the methods of transport and the organisation of weaving techniques. Northern and western India were predominantly areas of wheeled traffic; but in the south, as Tavernier pointed out, the pack animal was the chief means of conveyance, and the East India Company's own records confirm that oxen were extensively used to transport its goods.[33] Local topography and perhaps the fragmented nature of the political rule in the south combined to keep its transport system at a relatively undeveloped state. But the pack bullock at least had the advantage of mobility, even though compared with wheeled vehicles it was an expensive means of transport. In Bengal industrial production could be decentralised, because in its inland waterways the province had a cheap and highly flexible means of movement.[34] The geographical contrast between the north and the south-east was naturally reflected in the contrasting character of their industrial organisation. The flat plains of northern India made it easier to construct roads. As a result cities were able to grow in both size and population, and the same process contributed to the division of labour among the urban production units and the creation of external economies to a whole series of related activies.

But for individual traders the economics of transport were not always a simple consideration, as we can see from the factors that influenced the Company's own decisions. Arguments could be advanced equally for and against industrial concentration, and in the 1730s the Fort St George Council gave much careful thought to the question of reorganising its supplies of textiles. For some time the Company had been urging the Council to encourage the settlement of textile manufacturers within its own bounds. In 1732 the Court of Directors expressed alarm at the apparent inability of Madras to revive its ancient glory, when several thousand bales of calicos were sent from the port every year. Next year the levying of duties on tobacco and betel by the tax farmers in the outlying villages of Egmore and Trevitore was forbidden, and the Court hoped that the measure would induce the weavers, spinners, and other textile workers to come and live there in great numbers. If the Company could receive a sufficient quantity of cloth from within its own

settlements, the prime cost would obviously fall since several items of ancillary charges would no longer be necessary.[35] The reply of the Madras Council was revealing. The outlying villages were held to be unsuitable for textile weaving because of a number of reasons, among which was a lack of trees and groves. This was a significant point. The length of the Coromandel cloth was generally much greater than that of Gujarat or Bengal cloth, and the preparation of the warp probably required much more space than elsewhere, which was conveniently provided under the shade of trees. Orme's stereotype of the Indian weaver universally working under trees was certainly untrue of Bengal and western India:[36] it was a practice confined to south India. Fort St George mentioned two other problems. Procuring cloth from the districts of Worriarpollam and Salem involved twenty days' travel for pack bullocks, but the Council considered the cost of carriage and the road tolls worth paying in view of the much lower price of provisions and grains in the villages as compared to towns. There was also the fact that 'the demand for Cloth for the Consumption of the people in populous countries takes up the labour of a great part of the inhabitants and all the Cloth that is made in those parts of the Country are a farr more uneven thread and thinner Texture occasioned from the immediate vent the weaver finds for it'.[37]

The settlement of weavers inside the Company's jurisdiction was accomplished a few years later, but only by building a new township called Chindadre Pettah, for which special concessions were granted to the promoters, and in 1737 the Council was able to report that 230 families had settled in the new suburb.[38] The attempt to attract textile workers to the Company's settlements was nothing new and the policy had a long history behind it.[39] But the 1730s witnessed considerable movement of weavers both in the south and in western India, which benefited Madras and Bombay alike. The political insecurity which had been increasing in the decaying empire since the early years of the century had suddenly escalated and become a positive threat to the established centres of trade. In Gujarat as early as 1712 the Company's broker was complaining that marauding bands of Marathas were continually disturbing the chintz-printers in the neighbouring villages of Broach.[40] In 1725 the printers fled from village to village carrying with them unfinished pieces of cloth in order to avoid the invading troops.[41] By 1734 the Surat Factory records were full of references to the exodus of weavers from Ahmedabad in the direction of Surat, and three years later the Factory was able to recruit forty-eight families for Bombay.[42] Towards the close of our period, Surat, which had little weaving industry of its own in the seventeenth century, had become a considerable manufacturing town. It is evident that the alleged attachment of the Indian workers to homesteads applied only to times of prosperity[43] The letters

sent home from India by the Company's servants in the third and fourth decade of the eighteenth century not only endow the weavers with a high degree of mobility but also frequently hold it responsible for their inability to supply the amount of cloth ordered from England.

Migration provided partial relief from the invader and political extortion, as well as famines and similar natural calamities. Politically unorganised, the weavers found in mobility an effective and traditional weapon against harsh treatment.[44] In 1736 the Madras Council observed that around Arcot many great men were erecting new townships for the migrating weavers and endowed them with special privileges. But after some time the local rulers could not resist the thought of raising additional taxes from the people. The weavers put up with such extra impositions for as long as they could bear, but beyond a certain point they would suddenly desert the settlements. As the Council noted with some satisfaction mixed with exasperation, 'the weavers when disgusted leave lighted Lamps in their Houses and remove to some other part of the Country, so that whole Towns are deserted in a Night'.[45] The just retribution suffered by grasping rulers through the secret flight of the weavers had the inconvenient consequence of delaying the Company's cloth procurement. Apart from political pressures, the south also experienced during these years a number of catastrophic famines. From 1729 to 1731 the harvests were successively bad, and the scarcity of raw cotton and foodgrains accelerated the tendency towards movement which had become apparent since the early 1720s.[46] A survey undertaken by Tomby Chitty, the Company's chief merchant in Madras, of the main supply centres in 1731 reveals a picture of great devastation and hardship among the textile workers. At Tinvanem Vieravande most of the weavers were either dead or had left, and the agents who bought the cloth for the Company returned the advance of money that had been sent. At Acheravacum and Mudarandarum out of 600 weavers only 200 remained. In Maunam Paddi Chumpacum 100 out of the former 400 were left; at Caulea Pettah 60 out of 200, and so the list goes on.[47] The report was drawn up in August, but as early as January the Council had informed the Court that it would be unable to comply with the annual list of investment, as the effects of the famine were beginning to make themselves felt on the supply of cloth through the migration of weavers.[48]

With the establishment of large-scale French trade on the coast of Coromandel, and the revival of Dutch commerce, new centres of trade had begun to exert their influence on the textile industry of the south. The country around Pondicherry had become important for cloth weaving, and in 1731 the same letter that drew the Court's attention to the dispersion of weavers also referred to the strength of French and Dutch competition which made it difficult to hold down prices.[49] The

prosperity of the industry appears to have been moving away from the districts nearer to Madras, and as the Marathas entered Garnatic there was a distinct southward migration of weavers and spinners. In 1741 when the Madras Council issued an order forbidding their merchants to provide cloth from the southern districts it caused much uneasiness among them because, with the approach of the Marathas, the textile workers had fled to Salem and other areas.[50] The economic dislocation caused by the latter's plundering raids was not confined to south India alone. From Bengal the Kasimbazar factory reported in 1742 that in the aurangs where most of the Company's silk piece goods were made the Marathas had burnt many of the houses and with them the weavers' looms.[51] In his Memorie of 1755 Jan Kersseboom, the departing Chief of the Dutch Factory in Bengal, estimated that during the period of Maratha invasions close to 400000 people were killed in Bengal and Bihar and among these were many merchants, weavers, silk dealers, and other useful inhabitants.[52] In Balasore the fleeing weavers resorted to the desperate expedient of leaving their looms, which were later returned to them,[53] in the custody of the English Chief within the Factory gates. What these particular examples illustrate is of course the extreme vulnerability of the industrial workers to political instability, a vulnerability that was much greater than that of the peasantry. Wars, when they did not pose a direct threat to the location of the weavers, could also disrupt communications and with it the market on which the weavers depended. The result could well be the industrial decline of entire regions.[54]

The organisation and structure of textile production in India

The European Companies quickly discovered, as they attempted to expand their trade in Indian cotton piece goods, that there seemed to be a vertical link between marketing and industrial production in the seventeenth and eighteenth century India. The textile workers appeared to have adopted two distinct approaches to the problem of adjusting output to demand. There were those who wove traditional and well-known varieties of cloth for the open market. But more often they worked for particular merchants who provided working capital in return for a guaranteed supply of cloth which was frequently of a special type suitable only for certain export markets. The functional distinction between the two systems does not necessarily imply that they were mutually exclusive in practice. The same weaver who worked to order during the busy export season might decide to work at his own risk during the slack months.[55] Whichever system was in operation, it was unlikely that the weaver would be in direct contact with the final customers, without any intermediaries at all. Irrespective of whether his

source of capitalisation was mercantile or self-generated, he was strongly dependent on the wholesale dealer for marketing his products. Not the least reason for this was the differentiated character of the Indian textile industry. The technology of production involved many intermediate stages, and the separation of functions was social as well as technical. The comments made by Orme were relevant in this connection. Whereas most craftsmen in India were able to perform singly all the different stages of the production process and were hence at the mercy of tyrannical princes who wished to commandeer their services, the textile industry required the combined skills of several separate groups of craftsmen before the finished cloth could reach the consumer in its final form.[56]

The absence of central control in production has crucial implication for industrial organisation and its type. Under such conditions it is easy for traders to assume control over artisans through their greater experience of the market. The weaver on his part can strive to minimise his financial outlays and risks by selling the unbleached cloth to the wholesaler, who arranges the final stage of finishing. Here again the specialisation of technical functions left a great deal of room for flexibility, and the degree and extent of control exercised by the producer or the trader respectively over the successive processes was likely to be determined by the weight of historical circumstances. What form the actual arrangements could take can be seen from a description of the cloth trade of Bihar dating from the early seventeenth century. The province was known for its middle-quality strong, white cloth, which was woven in the neighbourhood of Patna, the administrative seat, and a town called Lakhowar some 30 miles south. In a series of letters written in 1620, Robert Hughes pointed out that the cloth was daily brought to the latter market by the weavers from the surrounding villages and sold mostly in a raw state. After purchase the buyer delivered the 'raw' cloth to the bleachers who took three months to wash and starch it and charged Rs 3 per 20 pieces. The price paid to the weavers for the unbleached cloth was fixed by the current market prices for the finished products less a discount of 25 per cent. It is evident from this description that Lakhowar served as a wholesale centre for the cloth trade, while Patna had an internal consumption of its own because the pieces which the weavers sold there were already Vhited and cured'.[57] Although Hughes assured the Surat Factory that the region was capable of supplying 20000 pieces of cloth annually, he also made it clear that this would be difficult to organise from Patna, for his own experience told him that what the weavers brought into town was finished cloth for the local bazaars only and limited in quantity. Furthermore, the big merchants who arranged to buy cloth directly in the countryside were not prepared to sell it in the local market at the going rates of profits as they could

'make a far greater gayne' by exporting it to Agra, Lahore, and other north Indian cities.[58]

These letters indicate clearly the important role played by the structure of markets and the pattern of consumer demand in industrial organisation.[59] Since demand for cotton clothing, in spite of seasonal variations imposed by religious and other festivals, is a continuous function of time, the weaver cannot exist without the help of the trader who holds and controls stocks, even in those cases where he undertakes to finish and transport his products to the urban or country markets. To attempt to characterise a craftsman as one kind of specialised trader is to ignore all historical reality.[60] A situation in which the industrial producer sells directly to the consumer is likely to be a limiting case of an extreme kind. Such a condition would probably obtain only in a very primitive economy where the handicrafts do not provide more than a partial means of subsistence and where the division of labour has not proceeded beyond a rudimentary level. For a theoretical justification of this view one need not look beyond the famous example of Adam Smith's shoemaker or nailer, whose single-handed output, as he pointed out, in one year would be sufficient to provide for the needs of a population far beyond the local village.[61] Access to market extending beyond the immediate location of the artisan was therefore a necessary condition for complete specialisation.[62] The close interconnection between commerce and industrial development is too well recorded in pre-modern Europe and Asia to need much emphasis. In the pre-capitalist society, as Marx observed with some force, commerce rules industry which is the reverse of modern society.[63]

It can be argued that production for wholesale trade was the force that brought about the subjection of industrial crafts to commercial capital. The most critical consideration in any kind of industrial production is to know what and how much should be produced. For artisans engaged in full-time occupations such as weaving, it is difficult to acquire a detailed knowledge of the larger market, and it is simpler and easier for them to rely generally on the information supplied through the merchants as a means of controlling the level of output. Large-scale production also requires considerable capital input, even under conditions in which the proportion of fixed capital is relatively small compared to working capital. Finally no wholesale dealer can operate efficiently unless there is a certain amount of product standardisation. The contractual relationship between the merchant and the craftsman arose in the first place out of mutual need, and the merchant in the language of Marx was merely the man who 'removes' the goods produced by the guilds or the peasants. But from the provision of a specialising service by the wholesaler it was an easy step to the appropriation of the producer's labour.[64] This, according to Marx, could take two roads.

The producer himself could become a capitalist and a merchant. On the other hand, he might become a mere worker for the merchant, fully separated from all decision-making and the ownership of his own products.[65] Historians looking at the industrial development of Europe in the sixteenth and seventeenth century have taken the *verlaggsystem* or the 'putting out' system, under which the merchant advanced to the weaver not liquid capital but the actual raw materials, as an universal illustration of Marx's second argument.[66]

It was stated earlier that the Indian method of textile production relied heavily on the system of commercial advances. It was quite different from the 'putting out' system. For the merchants almost always advanced cash sums and not raw materials under the traditional Indian contractual relationship. The Indian system was essentially based on the ideas of Islamic jurisprudence. The law of *salam* sales, for example, derived its authority from the Koran itself and literally signified a contract involving a prompt delivery in return for a distant delivery. In the language of the law, it meant a contract of sale, causing an immediate payment of the price, and admitting a delay in the delivery of the wares. According to Hanifa a salam sale was valid only if, among other conditions, it specified the period of the delivery and the rate of the capital advanced. It is also specifically mentioned in the *Hedaya* that 'articles bespoke from the manufacturer, in a contract of Sillim, are considered as entities . . . and that a contract for workmanship is a sale and not merely a promise'.[67] In India from the second half of the seventeenth century onwards, as we shall see, a system similar to the *verlaggsystem* did develop in some places, but it happened invariably under the influence of European trading. It was striking that perceptive European servants of the trading companies were fully aware of the contrast between the Indian system of production and that prevalent at home, although they showed little awareness of the different juridical tradition. In 1676 Sir William Langhorn in the course of a spirited defence of the system of cash advances reflected, 'In Europe industry is favoured and prosperity secured, and particularly weavers of all sorts like our clothiers and Italian fabriequers raise themselves vast estates; now with such the greater your dealings the easyer your termes, it being sure gaines in the makers own hands. But here the quite contrary, where they dare not hoard nor increase their estates to any bulk. Its meat for Harpys. The merchants who are in some way of getting, spend it in a manner all in good workes and plentiful living, where they dare; reserving little else but creditt and a bare stock to carry on business. But the poore weavers between their inbred way of feeding Bramenys and the extortions of their Avaldars, live meerely from hand to mouth . . . and seldom able to put a peece upon the loome without the money beforehand.' It was possible, the Agent of Fort St George continued, for a small dealer

travelling with his pack bullock to pick up a few pieces here and there ready manufactured and at his own prices, taking advantage of the weavers' necessity. But unless the Company expected its Agent to trade in a similar manner from Masulipatam to Madras, it was necessary to contract in advance with those merchants who had agents up-country and were able to supply large quantities of cloth. The other possible alternative was to send up their own factors inland and 'money distributed up and down to deliver out among the weavers'. Under the advance contract system, the price at which the weavers were prepared to supply the goods was the 'markett rates' determined by competition among the buyers and sellers. The merchants included in their quotations the risk of non-delivery as the weavers were prone to runaway or even die at times.[68]

Langhorn's account, supported by numerous other instances, highlights several significant points on the nature of the Indian textile production. It is unquestionably true that the weavers needed working capital both to buy raw materials and to support themselves during the time the cloth was being woven. But even more important was the indispensable role of the advance system in securing the cloth in large enough quantities. It was a contract that imposed definite obligations on both sides. Just as the merchant was assured of receiving his supplies on time with a reasonable degree of certainty, the weaver on his part regarded the advance as a deposit on orders.[69] In July 1670 the English Factory in Surat found itself hard pressed for cash but decided to borrow very large sums of money because of'the largeness of the Investments in all places which must of necessity be supplied with cash to keep the weavers from falling off to other merchants'.[70] Once the money was delivered out to the weavers, it created at once a short-term supply monopoly. In 1673 the Broach factors were reporting to Surat that they had ordered the weavers and the broker not to bring in any more cloth known as tapseiles, but they were told that, as the weavers had received Rs 7000 in advances for making this particular type of cloth, unless the Company accepted the cloth the deposit would be forfeited.[71] This was a point that led to a running struggle between the Company's servants and the Indian merchants. In 1675 in Madras the *Chitty* merchants came and represented to the Council that the weavers, finding raw cotton scarce and more expensive than at the time of the contract, were using inferior threads in order to reduce costs. If the Company continued to sort and grade the cloth brought in according to the original samples, supplies would soon cease because either the merchants accepted what the weavers delivered to them or they ran the risk of losing their money.[72]

Apart from the problem of scale, the organisation of production based on the advance system involved two other issues, the measurement of

risks and the question of quality control and standardisation. Economic success in the area of textile production required fairly close supervision of the weavers, and the Company's servants advocated the use of middlemen on the ground that if they dealt directly with the weavers 'att the yeares end, when we expected to be invested of our goods, we should undoubtedlye come shorte of half our quantitye, besides undergo a hazard of their running away where there were no hope for us to fynd them'.[73] In 1675 when the Council debated the critical situation in the supply of cloth, as presented by the merchants of the Chitty community, Cassa Verona, the leading independent merchant in Madras, alleged that the Chitty merchants were not as diligent in looking after the weavers in the country as they should have been and that he himself employed eighteen servants, each with his own circuit in which a watchful eye was kept on the work of the weavers.[74] The commercial system adopted by the East India Company shifted the risk of default by the workmen to the shoulders of the Indian merchants. But the problem of quality control proved much more difficult to handle, and it tended to get worse at a time of commercial or general economic crisis. On one occasion in the 1720s when the Madras Council complained to the merchants about the uneven quality of the cloth delivered, they retorted that the pieces were run off the looms in a great hurry and that they could not be held responsible for strict standardisation, since the quality was likely to deteriorate if the cloth was woven in a hurry. They also added that when the demand for cloth was 1000 bales annually from Madras, it was not too difficult to keep the weavers tied down to the required quality, but now that the demand had increased to four-fold, the task was almost impossible to achieve. The essential dilemma sprang from the refusal of the weavers to work without substantial advances, which led to a monopoly situation.[75] A decade later the problem was still with the Madras Council and in an endeavour to overcome it, it was proposed to the merchants that their contract should contain a penalty payable if the quality of the cloth did not conform to the musters. To this, Molinga Kistna, one of the merchants concerned, replied that from long experience he knew that it was impossible to obtain two pieces exactly alike from different weavers. He was even prepared to go so far as to say that the same weaver was incapable of producing two identical pieces of cloth. The accepted method in the country was to advance money to the weavers and adjust the price later according to the differing quality of the woven cloth. As there was very little demand elsewhere for the type and quality of cloth ordered by the Company, it would expose the merchant to great hardship if the Company's sorters returned a great number of pieces back to him.[76]

These examples seem to indicate that, in spite of the alleged depth of

the weavers' poverty, they were able to place themselves in a strong bargaining position. Before advancing money to the weavers, the merchants naturally took certain precautions. In July 1673 when lack of rains was causing great anxiety about the autumn harvest, Isaac Reynardson instructed the Baroda broker not to 'impress' any more weavers, fearing that the price of grains might rise to famine heights which would inevitably force the handicraftsmen to migrate to other towns in search of physical sustenance.[77] The detailed, almost daily reports sent to Surat from Broach by Reynardson and his close colleague William Grawley in the months from June to October in 1673 provide an invaluable source of information on the condition of the textile industry in Gujarat, and show that during this period at least the competitive position of the weavers was not seriously undermined. For this they could thank the strength of demand for their goods in the Islamic countries of western Asia and also the competition among the European buyers. In June Reynardson writes to Surat that the popular varieties of cloth (the baftas and sovaguzzes) are coming in from the weavers at a very slow rate. When he pressed the Indian agent to hurry up the supply, it was discovered that advances had been given to the same Khatri weavers who were also working for the Dutch and that there was no prior agreement on prices according to the quality of the cloth. This had the awkward consequence that when the weavers brought in the cloth, the price had to be bargained for piece by piece and if the weavers were not paid what they asked for, they took their goods to the Dutch warehouse.[78] The keen competition for the weavers' services and the rise in the price paid to them were the result of the Dutch Company shifting its textile purchases from Nausari and Gandevi to the towns nearer to Broach, and even in September the English factors were complaining that they were being forced to raise the weaver's price for white cloth, most of which was being taken to the Dutch broker.[79] That the weavers were highly responsive to supply prices is also demonstrated by the crisis which afflicted Fort St George's textile trade in the 1720s. The decline in the supply and the quality of Madras cloth was directly attributed to the losses suffered by the Company's merchants, who refused to pay economic prices to the weavers, in contrast to the French who had large supplies of cash and gave better prices, which eventually forced both the Dutch and the English to raise their prices also.[80]

While the interaction of market forces served to protect the economic position of the weavers, it cannot be assumed that the situation was a static one. The existence of a commercial and industrial system based on advance financing pre-supposes that there are well-defined customary or statutory laws as well as the necessary market structure to protect the system. It may be asked to what extent was the increasing com-

plaints of dislocation in supplies that was being voiced in the early eighteenth century from both Gujarat and the Coromandel coast the result of a breakdown of these customary relationships. Again, why did the Indian merchants prefer the system of cash advances as opposed to the European 'putting out' method ? At first sight the answer may seem to lie in Marx's theory that the control of artisans by merchants tends to perpetuate the pre-capitalist method of production. But it must be remembered that the Indian system incorporated a differentiated functional chain that was commercial as well as industrial. Between the large export merchant situated at the port of shipment and the weaver, there was a whole line of intermediaries. The cultivation of raw cotton, its distribution, the spinning of yarn, and the weaving process itself were all separately financed and the entrepreneurial groups were quite distinct from one another. To break out of this traditional historical institution probably required something in the nature of Bombay's economic *tabula rasa* and its desperate urge to create a local weaving industry.

In 1670 the Court of Committees was writing to Bombay that the Council's efforts should be directed towards the 'settling of manufacturers' on the island and they should provide the weavers with raw cotton, yarne, and looms if necessary'.[81] One of the impediments facing the weavers wishing to settle in Bombay was the island's total lack of the complementary services needed by the industry. In 1670 the weaving of cloth actually came to a stop in Bombay because of a shortage of yarn and looms which had to be supplied from Surat. The narrow market for the weavers' product in the island also had an inhibiting effect.[82] The practice of advancing yarn to the cotton weavers, however, continued throughout our period, and as the number of craftsmen increased in Bombay during the first half of the eighteenth century, the Company stepped up its purchase of yarn in the districts of Gujarat specialising in its production.[83] Bombay's direct participation in organising the supply of raw materials was the nearest equivalent to the 'putting out' system, but it remained largely an exception. In the south the method was never tried, though the Dutch East India Company did on occasions employ weavers and dyers in their own factories, on the basis of wage payments.[84] The position of the industry in Bengal was somewhat different. The indigenous system of production remained virtually unaffected there, at least until the invasions of the Marathas in the 1740s. But several decades earlier the Company had begun to ship raw cotton from Surat to Bengal as a direct attempt to lower the cost of production.[85] It may be surmised that the political and social stability enjoyed by Bengal during the first four decades of the eighteenth century succeeded in preserving the traditional weaver-merchant relationship and warded off the pressures for change which had become evident in western and southern India.

Indeed, there can be little doubt that the pressure was in some ways increasing. The impact of European trade, in its size and volume, expressed itself not so much through a direct control of the industry and its organisation as in a form of indirect control exercised through the existing middlemen. Two opposing forces were converging together. The expansion in the volume of European investment which took place in the first half of the eighteenth century called for an increased regularity in the system of production. But this was a period when regularity was diminishing, and the textile industry was being constantly disrupted by recurring famines, wars, and invasions. The natural reaction of the merchants with definite contractual obligations to the trading companies would be in such situations to tighten their control over the artisans in an effort to insure against losses. If the cost of raw materials was increasing at the same time and their supply becoming uncertain, the craftsmen on their part could well have demanded that advance financing should take the form not of money payments but of the provision of yarn and foodgrains. How far this hypothesis actually corresponds to reality is difficult to determine. In 1736 the Madras Council wrote to the Court that the poorer weavers would not 'sett to work till the Gomasta has supplied them with Cotton Yarn and Rice to support their Families, or money for both'. The gomasta had to supervise the weavers very closely and take the piece of cloth off the loom as soon as it was finished or else the weavers sold it for cash. Complaints to the local *havildar,* the law enforcing officer, only invoked the plea of poverty by the workmen and the havildar's dictum that necessity has no law.[86]

In and around Surat political insecurity and the decline in Gujarat's trade with the Middle East heightened the weavers' dependence on the merchant.[87] The English Factory was urging the Surat broker in the 1730s to exercise greater control over the artisans. The textile contracts were given to certain merchants on the ground that they had such a large number of weavers in their employment that they were able to gain a lead of six to eight weeks over any other merchant in Surat.[88] Although exact evidence is lacking, the weavers were probably retained by the merchants on the basis of piece rates as well as monthly wage payments. In this respect the terms demanded by the Parsi weavers of Surat recruited for Bombay in 1738 are highly suggestive. The weavers submitted their proposals through Boman Patel, the caste leader, and asked for a monthly wage rate of Rs 5, an agreed price for each piece of cloth woven, and an advance payment varying from Rs 40 to Rs 100 per weaver. The house rent in Bombay was not to exceed Rs 12 a year. Boman Patel demanded an annual salary of Rs 500 for himself to be paid for the rest of his life.[89]

Towards the close of our period, we may conclude, in some areas of

India the textile workers had come perilously nearer to being wage labourers. Control by merchants had increased both in western and southern India. Of the three regions supplying textiles to the overseas export markets, Bengal alone seems to have escaped any fundamental changes in industrial organisation, though the ravages of the Marathas had ruinous consequences for the merchants. In remote areas, cut off from trade, the artisan of course still pursued the unchanging and recurrent rhythm of activity which characterises a closed economy. The advance financing of production for a market was a vertical system, with the force of integration coming from the top rather than below. In its pure form it allowed the artisans considerable initiative in decision-making and gave them a certain measure of economic independence, but when its twin pillars of support, an established social and political order and a steady demand, were shaken, both the merchant and the weaver were compelled to seek modifications. Direct employment by merchants gave the artisan an assured source of income, although it reduced the flexibility which he had previously possessed, and it was the merchant who now stood to benefit from the operation of competitive market force.

The general structure of costs: labour, raw cotton, and yarn

One of the most difficult problems confronting the historian of pre-modern industries is to discover what the cost structure of particular handicrafts was and how it compared with other forms of economic activities. It can be assumed that variations in the level of costs would determine in the long-run the size of an industry and the number of people it was capable of supporting. But the records available to us furnish no more than an occasional glimpse of the total size of the textile industry in India, and most of the quantitative estimates which have survived post-date the Battle of Plassey. According to one such estimate, summarised in Table A.io, the weaving of cloth in the Dacca district gave employment to 25000 weavers and 80000 spinners. The interesting point about the report, written in 1776, was that its authors attempted to measure the wider impact of the industry on other economic sectors, as for example, agriculture, transport, and government revenue. Their main purpose was to demonstrate that the restrictive commercial policy being adopted by the East India Company was likely to lead to a contraction of the industry which would in its turn have a dampening effect on government taxes.[90] That the actual figures given in the report should be treated with caution scarcely needs much emphasising, and it is clear that they are best treated as estimates derived by simple rule of thumb. What the report does in analytical terms is to draw attention to the interacting effect of the various components of costs. Even an indus-

Table A.10. *Dacca cloth manufactures for exportation*

Eight Dacca aurangs	Number of looms	3 Weavers to each loom	Species of cloths	Number of pieces	Threads in each piece		Weight of thread		Value of the cloths
					Ch*	Sk*	Md^s	Sk^s	A. R*
Betty	1700	5100	Doreas and jamdanes	17000	2	—	850	—	371500
Dumroy	1500	4500	Terrandams	15000	1	8	562	20	300000
Sunargong	1600	4800	Fine mulmuls	15000	1	—	375	—	431600
Mucheca Gall	1200	3600	Coarse mulmuls	110000	1	8	3437	20	560500
Tufbadie	1200	3600	Cora tanjebs	12000	1	4	375	—	119000
Junglebarry and Bajetpore	700	2100	Finest muslins	6000	1	—	150	—	249800
Ana and Seripore	200	600	Dimmities	2000	2	—	100	—	16000
Chaunpore and Serampore	300	900	Baftaes, jonas and Gopaes	3000	2	—	150	—	40000
	8400	25200		180000			6000	—	2088400

Table A.10. *(cont.)*

					Number of people employed
Thread in cloths		6000	8000	Maunds	
Ditto in flowering, and for sale		2000			
One woman prepares cotton, and spins about 4 seers per annum				Women	80000
Thread from Surat cotton	Mds	500	8000	Maunds	
Ditto from Dacca capass	Mds	7500			
7500 maunds thread, require, capass 50000 Mds					
The cultivation of 3 Mds capass, gives half employment to two ryots for six months, November and April inclusive				Ryots	33333
Weavers, and their assistants				—	25200
Rusfagurs				—	400
Chickendars				—	300
Washers				—	300
Dressers				—	600
Goondeegurs and sackagurs				—	400
Gassidah flower workers (women)				—	5000
Gibegurs 25, burmagurs 10				—	35
Nackasses				—	10
Badlagurs				—	100
Packers				—	150
Delals and their gomastahs, sircars and servants				—	205
Picars and their gomastahs, sircars and servants				—	543
25 boats, 7 men to each (dandies)				—	175
					146751

Source. Ninth Report from the Select Committee 1783, Appendix 51.
Note. Ch* = *chataks* or *seers,* Sk[s] = *sikkas* or *tolas,* Md[s] = *maunds,* A. R[s] = Arcot rupees.

try as technologically simple as handloom weaving can have wider ramifications through the rest of the economy.

The absence of quantitative material on the costs of textile production in India during our period is not an indication that the Company's servants were not interested in such questions. Textiles were such an important item in the Company's import trade that both the Court of Directors and the factories in India had a vital interest in finding out the true levels of costs. In London concern over prices became particularly acute whenever there was a down-turn in trade. In 1736 the Court is writing to Madras, 'We received but 3440 bales, though in your first letter you gave us hopes of having a large quantity. The dearness of Rice and other necessarys of life is represented as one cause of this deficiency. This being a temporary calamity, whenever plenty reigns in the countrey, we expect your performances will be answerable, though we can't help observing that for many years past, your letters have either been full of the dearness of grain, or cotton. In the former case, Manufactures are not much affected in most Countrys, but Weavers and Spinners work the harder to procure a subsistence for their Familys. Were it otherwise, the value of goods would continually fluctuate according to the price of Corn.'[91] Three years later the Bombay Council ordered the Surat Factory to exert all possible means to find out the real cost of making each variety of cloth purchased by the Company and how far the cost depended on the rise and fall of cotton prices.[92]

From the seventeenth century onwards a common pattern of reasoning emerges. The officials were unanimous in ascribing the fluctuations in the cost of production to changes in the price of raw cotton and foodgrains. Oxenden's comment from Surat in 1663 that the prices of cotton goods vary according to the scarcity or abundance of crops found a parallel in Langhorn's order in 1672 prohibiting the inhabitants of Madras from making purchases of cloth before the Company's merchants had made theirs, because the failure of harvest in the previous year had raised the price of raw cotton to a level that was drastically curtailing the supply of cloth.[93] As cotton was the most important input, after several degrees of processing, in the manufacture of cloth, it is understandable that the price of the finished product would be sensitive to the anticipated changes in its supply, though one would also expect a time-lag to interpose between seasonal changes in cotton harvest and the actual rise in the cost of weaving. But it is less apparent why the price of foodgrains should have exercised such a marked influence on the latter. From the categorical statements made by the Company's officials, would it be justifiable to conclude that the wages in the industry immediately adjusted to changes in the cost of living or that the independent producer was able to pass on his notional wage costs to the customers without friction? To support these assertions, the English

factors in India frequently alleged that the weavers were already living at the margin of subsistence and that their general poverty allowed them very little latitude for absorbing a rise in the price of wage goods.[94] In the face of scepticism such as that expressed by the Court in 1736 the Madras Council argued that the price of manufactured goods in the province had been rising for several years in response to bad harvests, though the Company may not always have been aware of this rise because the merchants were tied to fixed contract prices and forced to absorb the increase in the producer's price.[95]

The speed and rate at which a scarcity induced by harvest fluctuations might affect the cost of weaving would depend conceivably on the relative weight of material and labour charges in total cost. When the contemporary observers in India referred to the price of foodgrains as being one of the determining variables in the cost price of textiles, their meaning was that the margin of profit left to weavers after deducting the cost of raw materials was just enough to live on in good years. It is significant that George Morton Pitt, the governor of Fort St George, who could use economic analysis with considerable skill and sophistication should have pointed out in 1731 that the trend in Madras was for the quantity of cotton in a piece of cloth to fix the value more than the cost of workmanship.[96] Three years later he embarked on a detailed economic explanation as to why industrial costs were closely related to the condition of agriculture. The main culprit, in his view, was the nawab of Carnatic who had been rapidly and successively raising the rate of land revenue for a number of years, which had now reached the point when large areas of land were left uncultivated. 'Your honours will admit it,' Pitt had written earlier, 'as an incontestable Truth, that in any Country where the Ground rents are raised to any considerable Degree, the Cost of the manufactures of that Country will increase in proportion; for the Produce of such Ground of which the manufacture is made will stand the Tenant in so much more; not only by the increased Rent he pays, but also in the price of labour, in dressing the Ground which must increase by so much as the other Products of the Ground, by which the Labourer is supported costs the Farmer.' Before south India was conquered by the Mughals, Pitt claimed, the ruling chiefs whose income came from land always took care to keep the irrigation tanks and reservoirs in a state of good repairs. But the Mughal policy of changing the local governing officers every few years meant that no one took the continuing responsibility for maintaining the irrigation works so that 'great part of the Lands lye uncultivated for want of water'.[97] To lend substance to his arguments, Pitt sent home a calculation of the cost of yarn in a piece of cloth and the prices of grains during the previous twenty years. None of the actual quantitative surveys on the structure of costs undertaken by the Company's servants in

the period before 1760 has yet come to light. But some idea of the relative proportion of labour and material costs in weaving can be gathered from a commercial report dating from the last quarter of the eighteenth century.[98] Like Pitt's earlier letters this particular report also sought to demonstrate that if the price of cloth was kept fixed at a time when the cost of raw cotton and yarn was rising, the only consequence was an unacceptable reduction in the share left to weavers, leading to serious shortfalls in supplies. As we can see from Table A.i i, in average years

Table A.i 1. *The manufacturing cost of Bengal textiles (in Rs)*

	Previous to 1789*					In 1789				
Textile types	Labour cost	Per cent	Yarn cost	Per cent	Total cost	Labour cost	Per cent	Yarn cost	Per cent	Total cost
Baftas fine	1.2	34	2-3	66	3.5	0.6	17	2.9	83	3-5
Gossaes Barran	2.2	35	4.0	65	6.2	1.4	22	4.8	78	6.2
Gossaes Commercolly	1.8	34	3-5	66	5-3	1.0	19	4-3	81	5-3
Gossaes ordinary	0.9	3i	2.0	69	2-9	0.3	10	2.6	90	2-9
Gossaes French	4.8	37	8.0	63	12.8	3-8	30	9.0	70	12.8

Source. Home Miscellaneous Series, vol. 393, pp. 261—2.
Note. *It seems that the Commercial Resident who drew up the table took an average of prices paid in the years immediately before 1789.

the percentage share of weavers' remuneration in making certain common categories of cloth was around 35, but, when the harvest was bad and the price of thread rose, it fell to a level as low as 10 per cent in the case of coarse varieties."

The objections raised by the Company at home were directed not so much against the general explanation that the harvest was in some way connected with the cost of production as to the fact that a season of plenty did not always lead to a fall in the price of textiles.[100] In India the only servant of the Company to challenge the connection, and being dismissed because of this, was the refractory member of the Surat Council, James Fraser, who put forward the suggestion in 1747 that in those years when grain was dearer the cloth was actually cheaper. The reason, according to Fraser, was simple. Spinners and weavers at a time like that worked twice as hard in order to earn more, so that 'their earnings may in some measure compensate for the dearness of provision'. The increased amount of yarn and cloth coming into the market and the hurry the producers were in to sell their output forced down prices of course. In the reply which the rest of the Council was quick to draft it was vigorously asserted that Fraser's reasoning only applied to

small quantities of cloth being produced for the bazaar and that anyone who imagined that an investment as large as that of the Company's could be procured without taking into account the economics of production was likely to have his fingers burnt,[101] for the accumulated experience of the Company's servants indicated that the geographical mobility of the weavers, which we have already referred to, was matched by an occupational mobility. There were signs from the 1720s that the decline in Surat's maritime trade was causing unemployment among the textile workers of Gujarat, and for the first time in the sources references begin to appear of the weavers turning to agricultural work.[102] In an economy still characterised by an abundance of land, it was to be expected that weavers and other craftsmen would combine their trade with part-time farming, and a certain switching of occupation would occur with a decline in industrial remuneration. In 1732 when a severe famine and attendant sickness decimated the population of Gujarat, the labour shortage led to a general rise in the wage rates, and it was being reported from Cambay in November that there was a great scarcity of workmen who found cutting *bajri* [millet] three times as profitable as weaving and spinning.[103] The Surat Council lamented in 1748 that the distracted political state of the city during the previous thirteen months had delayed the investment because many of the weavers had enlisted as soldiers.[104]

Our records are virtually silent on the rates of remuneration or wages earned by weavers. The monthly wage of Rs 5 demanded by the Bombay weavers in 1737-8 was a high figure, as other workers in the service of the Bombay Council were paid much less. John Taylor who was the Commercial Resident in Dacca at the end of the eighteenth century estimated that the net profit in weaving a piece of superfine cloth, which took six months, was Rs 47, shared by the head weaver and his two assistants. The latter two were engaged by the head weavers as monthly servants, and one of them, the weaver, received a monthly wage of Rs 3-3.5 and the other, the journeyman, Rs 1.5-1.75.[105] These calculations were made during a period when the demand for Dacca cloth had greatly declined from the peak levels reached in the first half of the century, and as Taylor was careful to point out the weaver was capable of earning more than his figures indicated. But the universal poverty of the weavers, repeated with such persistence throughout the seventeenth and eighteenth centuries, becomes difficult to explain in view of their equally well-recorded spatial and occupational mobility. Were the European observers merely reflecting one another's tenaciously held opinions rather than the reality, and passing on from generation to generation a sacred tradition in which the oriental order of things condemned the artisan and the husbandman to perpetual misery and allowed the merchant, the prince and the nobleman a luxurious living

built on the fruits of their labour ? The only exception throwing doubt on the established view comes from the unmistakable pen of Sir Josia Child who wrote in 1689, ^ ^ be objected that the poverty of the people is such that they cannot provide goods except money be delivered out to them beforehand, we say . . . we know they are not all so poor but that in any goods may be bought ready made as we find by evident instances and discourse with Captain Bowry.'[106] There is even an example from the crisis-striken Surat of the 1740s which reveals the Hindu weavers in the city organising a successful industrial action. In September 1742 the entire Hindu community of weavers in Surat went on strike and refused to complete the orders placed by the European companies on the ground that they were unfairly discriminated against by the government which made them pay a tax from which the Muslim workmen were exempted. As the Surat Council put it, 'The reason the Gentoos assign for not longer complying in making good the said [tribute] is owing to the decay of Trade or rather to the Diminution of their Business by the great increase of Moors weavers in this City who have for these few years past resorted here from all parts and the Gentoos thereby rendered incapable.' The leader and spokesman of the Muslims in Surat, Mulna Fakiruddin, whom the records describe as one of the great merchants in the city, strenuously opposed the idea of a compensating tax being imposed on the Muslim weavers. A compromise was finally reached, which settled the dispute, but only after the leaders of the Hindu weavers had left the city in a body.[107] The incident above shows that when particular caste groups saw their traditional economic interests threatened, they were capable of taking concerted action to protect those interests.

But the question still remains: how do we explain the desperate poverty of the textile workers to which our attention is so frequently drawn ? In the long-run, arguing on the basis of *a priori* reasoning, it cannot be doubted that real wages earned by labour in the various sectors of the economy would not remain severely out of step unless there were institutional barriers to occupational mobility. Even in tradition and caste-ridden India there are enough historical examples to lend strength to this point of view. In 1722 the President of Madras reports to the Council that the Company's cloth bleachers found their rates of wages inadequate and were turning to agriculture both because the work was less heavy and better paid.[108] Of course among weavers and other textile workers caste impediments to mobility can be expected to be less than in the case of those enjoying a higher ritual status. In the short-run the possibility for switching occupations was not an answer to the inequality of sectoral wages. Nor was agricultural work in the Indian subcontinent an hazard-free occupation. The petition of the Madras bleachers in 1736 for an increase of wages pointed out that the recurring harvest failures of the previous ten or eleven years and the accompany-

ing rise in the price of rice had so eroded the value of their earnings that it 'had induced a great number of their people to desert their habitations and take refuge in other parts where provisions were cheaper, many having sold themselves, wives and children'.[109] Whoever was responsible for drafting the petition proved himself to have been a skilful economic analyst: it was supported by a detailed breakdown of the working costs, the existing rates of remuneration, and the past and current price of rice (see Table A. 12). It can be safely assumed that for a group as

Table A. 12. *The cost of bleaching long cloth in Madras 1736*

[1 pagoda = 36 fanams = 2880 cash]

	pagoda	fanam	cash
Beating		3	
Cooly hire for carrying Brown cloth to washing place		1	30
Do. for carrying it back after it is washed		1	30
Conicoply's wages		1	
Goats dung to rub the brown cloth for washing		1	
Chinam, soap and choud		8	
Fuel for boiling the cloth three times before it is well washed		9	
Do. for boiling congee rice		1	
Indigo to prevent the red and brown spots in congee and cloth			40
		26	20
For every corge of Long Cloths washing rice allowed to the congee [starch] is measures 16, whereas the merchants account half thereof on their part and for the other half, 8 measures they receive in your petitioners account the value of it		10	40
Total cost	1		60
Bleachers paid by the Company for washing 20 pieces	1	5	
Bleachers' profit		4	20
The price of rice during the time the above price was fixed	5-6 pagodas for a garce		
The price now of rice	22-3 pagodas for a garce		

Source. The Diary and Consultation Book of 1736 {Fort St. George), p. 78.

conscious of the economics of their trade as the Madras bleachers the employment opportunities available in other walks of life would not have long remained unexplored.[110] The poverty of the weavers remains an undefined historical concept. We do not know whether they were poor, relative to other groups in India nor do we have any contemporaneous measurement of the concept of poverty. From the petition of the Madras washers it is clear that they had a perfect grasp of the notion of both a just and a minimum wage. If they were living at the edge of starvation it is possible that the overall wage levels in the subcontinent had already fallen dangerously low.

The interest taken by the Court of Directors and the Indian factories on the general structure of weaving costs gave rise to a large volume of information on the supply and condition of the labour force. In comparison the material on the supply of raw cotton and yarn in our period is relatively scarce, and we know very little beyond the broad outline. Cotton could be grown as a local crop in most parts of India provided there was enough water. But the main cotton-producing areas in the subcontinent even in the seventeenth and eighteenth centuries were the Gujarat plains, Central India, the Godavari delta, and parts of Bengal. While the looms of western India were supplied almost entirely with the yarn manufactured from local varieties of cotton, both south India and Bengal imported a considerable part of their total consumption of cotton from other parts of India. In the eighteenth century the textile industry around Madras received the bulk of their supplies from the districts 230 miles to the north west.[111] It was only in the 1730s that cotton cultivation began to increase in central Carnatic, induced by a shortage of yarn from the established sources. It is evident that the transportation and distribution of raw cotton, given the level of demand, was largely determined by the elasticity of production relative to other crops. It is difficult to explain why else Bengal, a region surely capable of growing all its own needs, should have imported cotton from central India and Gujarat, via the long sea-route. John Taylor writing in 1792 attributed the cross-haulage of cotton from one district to another to the variations in soil conditions and noted that even within Dacca, which was a large district, only a small proportion of cultivation was given to its growth. The fine Dacca cotton known as *kappas* was cultivated only on a narrow strip of land 40 miles long and 2-3 miles wide along the river Meghna, and the quality of the fibre produced in this area remained unsurpassed practically in whole of India.[112] Taylor estimated that one *bigha* of land (approximately 2765 square metres) required 2.25 *seers* (1.9 kg) of seed and in a favourable season produced 2 maunds (67.2 kg) of cotton. Of this only a third part was capable of being spun into really fine thread. This description, corroborated by other contemporaneous accounts, emphasises the extent to which Bengal's success in producing fine textiles depended on the rigid quality control exercised in the production of raw cotton. For example, a report submitted by the Bengal Board of Trade in 1790 pointed out that both the Surat and Sironj cotton imported into Bengal was only fit for the coarser varieties, though in years of high prices these were mixed with the provincial growths and used in the manufacture of low-priced muslins.[113]

The close relationship between the out-turn of the cotton harvests and the price of yarn was an observed fact. From the seventeenth century to the eighteenth each famine and the failure of the monsoon brought in a spate of reports from the cotton-growing areas about the

likely effect on the supply of cotton thread. At its worse it could bring to a total halt the weaving of cloth. During the great famine of 1731 in south India one centre after another reported that even those weavers lucky enough to be alive were unable to go on with weaving because of the lack of yarn.[114] A relative scarcity of thread could also develop out of an imbalance between the expected and the actual demand for cloth. Between 1673 and 1675, the years for which detailed information is available on the cotton industry of Gujarat, an acute shortage of yarn prevailed in the villages around Broach, although there were no climatic fluctuations.[115] The English factors were inclined to treat this shortage as part of the general increase in the demand for Gujarat textiles. But interested as the foreign merchants were in the causal connection between the supply of yarn and the cost of cloth, they left few accounts of its organisation and trade. According to Oxenden the thread was spun in the country by the poorest sort of people, who received part of their payments in advance from the dealer who arranged to collect and market it.[116] It is understandable that if the weavers were poverty-stricken in the economic syntax of the Company's servants, the spinner could hardly be expected to be rich. In fact, since spinning was much more of a part-time occupation than weaving and done largely by women, it was likely to attract labour from varying income groups, and in Bengal at least a really skilled spinner was in a position of semi-monopoly.[117] While in Gujarat and Bengal the production of yarn appears to have been localised in the areas where the weaving actually took place, in the south it was confined to particular districts. The Madras weavers received their yarn from regions estimated to be twenty to thirty days' journey to the south west from whence it was brought to the fair of Laulapetta and again distributed 'to all the weaving Towns in the hither Provinces'. The total annual sale of yarn at the fair was said to have been around 150000 pagodas.[118] It was this dependence on particular sources of supply which placed the textile industry of central Carnatic in such a vulnerable position in the 1730s when the Maratha invasions disrupted the normal channels of trade.[119]

Some problems of technology: stagnation or stability?

In the history of the Indian subcontinent a century does not appear as an overlong period. But to repeat the historian's favourite truism, some ages stand out more than others, distinguished by the qualitative changes in the economic or political structures of society. The eighteenth century was a period of great changes for India, perhaps the most critical since the Mughals first established their empire in the country during the sixteenth century. For the textile industry the fifty years from 1700 to 1750 witnessed a peak expansion in exports, which was followed by

fundamental structural shifts in the character of world trade in cotton textiles. Some of the reasons for the eventual decline of India's hand-loom industry were to be found in conditions internal to the country's history. The main challenge which was to alter radically the future course of events undoubtedly came from the impact of the Industrial Revolution in Britain. For the first time in her history India was to be placed in the position of having to import textile goods from a foreign country, and more than a century was to elapse before she was able with the help of imported technology to recapture some of the earlier vitality of her cotton production. What had gone wrong that made it so difficult for India to maintain the competitive position of her most important industry? To answer this question is to find an explanation of why and how technological transformations take place in the production processes. Why did the Industrial Revolution originate in Britain and not elsewhere, and why did it occur at the time it did ? In spite of the ingenuity and attention that have been lavished on the problem, historians have not succeeded beyond merely pointing to the possible combination of circumstances which brought about a rapid diffusion of new production techniques in Europe. One of the contributing factors, it may be suggested, was the role played by the Indian cotton imports. The development and application of a whole range of machinery, from mechanical carding and cleaning of cotton to spinning and weaving, were intended to create an import-substituting industry. It would be wrong to treat this as a deliberate act of human will analogous to the efforts of the developing countries today to industrialise. But the English woollen and silk manufacturers treated the Indian imports as a clear threat to their economic interests, and the desire for the creation of a domestic cotton industry was long dormant. Without the cost-reducing function of machinery, it would have been impossible to overcome the comparative advantage possessed by India. The East India Company at least was fully aware of the differential wage rates which prevailed in Europe and India. When the Court of Directors spoke of the wage rates of French workmen as being six times those of the Indian, it fully expected the price of Indian textiles to reflect if not the full difference at least a substantial part.[120]

In England the adoption of the new technology by the existing woollen industry persistently lagged behind the rate of progress in the cotton. This has been attributed in part to the technical problem associated with the nature of wool as a fibre and raw material. But we cannot rule out the fact that the transformation and adaptation of well-known and well-established systems of production may be a much more difficult task than the creation of entirely new ones, even when technological improvements are available. In eighteenth-century India the empirical basis for an Industrial Revolution was conspicuously lacking. There had

been no marked progress in scientific knowledge for many centuries, and the intellectual apparatus for a diffusion and systematic recording of the inherited skills was seriously defective. To these institutional impediments must be added the much more serious cause, the absence of economic incentives for improving the productivity of labour. For the workmen in India there were two scourges, commented Francisco Pelsaert. One was low wages and the other oppression by the ruling élite.[121] The appropriation of the producer's labour, it can be argued, is an infertile ground for any kind of technological advance which has as its objective the maximising of the economic surplus. But even without this restriction, the rationality of the entrepreneur's choice from among a number of different techniques can be dictated by economic factors alone. In a situation where there is surplus labour leading to low wages, and the production technique is characterised by a high ratio of net output to fixed capital, there may be an actual disincentive to the use of more capital intensive methods. India's textile industry in our period could have been caught in a low-level equilibrium trap of this kind.

The course of the expansion in cotton production set in motion by the new demand from Europe lends additional strength to this belief. The increase in output was achieved not by higher productivity brought about by technological improvements but by increasing the productivity per man and by expanding the labour force. Not only did the general technology of textile production remain absolutely unchanged but factor substitution was made difficult by the ease with which high-cost labour could be substituted for low-cost simply by moving from one region to another. The question of India's stagnation in technological development can be cast in a new form by asking a different question. Historians have traditionally sought an explanation for the occurrence of technological progress in one place and time as opposed to its non-occurrence. However, was there any compelling economic and social reason why India should have embarked on a search for new techniques and production methods at this particular stage of her history? Was the Indian weaving technique inferior and backward to those of other countries ? What foreign threat was there to her existing supremacy in cotton textiles ? When the threat did materialise in the nineteenth century, the necessary technology was imported from abroad by Indian businessmen themselves. Once again it can be said that the emergence of the factory method in the production of cotton goods in the Indian context was no mere historical accident. The object of these remarks is not to deny the existence of economic backwardness and its causal relationship with the differential rate of technological progress, but to emphasise the importance of human motivation for change before we begin the search for more impersonal, fundamental reasons.

That the technical processes embodied in the Indian cotton industry

in the seventeenth and eighteenth centuries had reached their practical limits at the end of the long carefully adjusted tradition in craft skills cannot be in doubt. The highly evolved dye-fixing technique which required a fairly complex series of chemical treatments of the cloth 'painted' with multicoloured patterns is an obvious example.[122] The process was based on an empirical and hereditary knowledge of the physical properties of the various kinds of dyes used and not on a knowledge of modern chemistry. But it was effective against the frequent and rough washing methods employed in India. It is true that there were certain colours in silk piece goods which the Indian dyers were unable to produce, and the Company sent out skilled craftsmen from England who were to teach their Indian counterparts how to produce the glossy black and other colours favoured at home. By the end of the seventeenth century most of the foreign dyers had either left Bengal or been withdrawn, and we hear no more of efforts to introduce new colours in the manufacture of Bengal fabrics.[123] In the art of spinning and weaving also a fine balance had been reached between the use of implements and human dexterity. The wheel had everywhere taken over from the use of the spindle as a spinning instrument, but there were certain types of cloth which could be woven only with the yarn spun on a spindle. The muslin known as Cossa Jura was one, the Dacca fine cloth another. The former used mainly tree cotton and the thread made from it was described as the 'hardest' thread because it was twisted by hand.[124] The fine yarn made from the Dacca cotton was also hand-spun, and experiments conducted during the nineteenth century demonstrated conclusively that not only was the hand-spun thread finer and better twisted than the machine-made yarn but the durability of the cloth woven from it was much greater than the mill-made cloth.[125] In the production of the luxury fabrics manual skills were irreplaceable and complex implements were at an actual discount. European observers often commented on the simplicity and even crude appearance of the looms used in India, and in all the calculations of costs there was not a single reference to the capital value of the looms. But it is apparent from the account given by John Taylor that the whole process of manufacture from the preparation of the raw thread, the warping, the fixing of the harness to the warp and the loom, and the final weaving was far from simple and required a high degree of skill on the part of the workmen.[126] Specialisation had gone so far that it would have required very great incentives to induce such men to change their production methods and habits drastically.

12

THE COMPANY'S TRADE IN TEXTILES

The discovery and adoption of Indian textiles in Europe

The adoption and the rate of increase in the consumption of Indian textiles in the Western world during the seventeenth and eighteenth centuries was one of those astonishing processes of diffusion which is comparable to the discovery and spread of tobacco, potato, coffee, tea, and, one is tempted to add, American silver. But it was not just in the financing of the East India trade through an increase in Europe's money supply that the New World had a vital role to perform. The opening up of new markets and the rise of new production methods based on African slave labour, which created the famous triangular trade between Europe, West Africa, and America, provided the Indian cotton textiles with a sustained outlet for nearly two centuries. The blue sallampores of the Coromandel coast became universally associated as the hated badge of slavery in the plantations of the West Indies and the southern colonies. In Europe itself the use of cotton and silk goods in house furnishing and daily and fashionwear presaged a more civilised and higher standard of living. It is significant that the consumer preference towards the lighter woollen fabrics should have coincided with the period when the imports of Indian and Chinese textiles were expanding. Cotton was cheap, washable, and the colours were relatively fast. Worn with outer woollen garments, it provided comfortable and easy-to-clean inner clothing. The utility of cotton goods was mentioned by the Jamaica traders in a petition dated 1704, in which it was said that 'the said island being situated in a hot climate, much of the clothing of the inhabitants is stained callicoes, which being light and cheap and capable of often washing contributes very much to the keeping them clean and in health[5].[1] For the rich, cotton fabrics served to distinguish between the winter and summer wear and gave an opportunity for fashion display in women's clothing that was difficult to achieve with material made from wool.

The popularity and the general acceptance of cotton goods in Europe from the mid-seventeenth century onwards is strikingly confirmed by the history of the East India Company's trade in Indian textiles, which continued to prosper in spite of successive prohibition acts and the imposi-

tion of heavy protectionist duties intended to curtail their consumption. Since many European countries had statutory prohibitions similar to those passed in England, it becomes inexplicable how the re-export trade alone could have sustained the very large volume of cotton textiles imported from India by the various East India Companies. Given the public demand for these goods, smuggling and the evasion of laws must have been widespread. As is well known, even the government was forced to admit in 1719 on the eve of the enactment of the second prohibition laws that 'there are more Callicoes worn in England that pay no duty than what are painted and worn here that do pay duty'.[2] For cotton textiles the main obstacle to market expansion lay in their industrial origin, a problem that the new agricultural commodities imported to Europe did not have to face. The intensity of the opposition to the use of Indian cotton goods was grounded in a fear of likely unemployment among the domestic cloth-workers, for it was believed rightly or wrongly that the sale of cotton goods was achieved at the expense of the home industry manufacturing woollen cloth. In the absence of proper conceptual means for testing the effects of international competition, it was perhaps to be expected that complaints of economic distress on the part of the clothiers and silk weavers in England would fail to separate the multitude of causal forces at work. The extravagant claims made by Daniel Defoe in 1708, that with the passing of the Act of 1700 the unemployment among weavers in London, Canterbury, and Norwich disappeared and that these places regained their previous prosperity, were only one indication of the inability of the seventeenth- and early eighteenth-century pamphleteers to test their assertions against concrete evidence.[3]

It will be shown later that the legal restrictions placed on the Company's textile trade did have some effects on its composition. But the overall effect could hardly have been so dramatic and instantaneous as Defoe asserted, and his views were contradicted by several contemporary observers.[4] The reason why the government acted positively in the face of mounting opposition to the unrestricted import of Indian industrial goods was partly its long-rooted fear of social disorders associated with economic depressions and partly a genuine desire to protect the domestic cloth industry. It should be noted that by the end of the seventeenth century the character of the woollen industry had undergone a change in England and that there was a Europe-wide movement towards protectionism.[5] The fact that cotton and woollen cloths were not perfect substitutes for one another did not go unnoticed. In a tract published in 1697, the year in which London witnessed widespread rioting by the Spitalfields silk weavers, it was remarked, 'The *India Goods* are so different in their qualities from the Product of our Country, and the main of our Manufacture, that it is absolutely impossible they should

ever do them any Injury.' The author claimed that domestic products such as woollen cloth, lead, tin, iron, corn, and leather would still continue to find a Vent' in foreign countries; but even he admitted that the finished piece goods were injurious to the economic interests of the broad silk weavers, and in justification for the continued importation of this type of goods he put forward the argument that the East India trade in general gave rise to enough employment in other sectors of the economy to compensate for the damage done to the silk industry.[6] This was a line of reasoning also used by another writer who argued that the East India trade could be instrumental in introducing 'new Manufactures, new Imployments, into England' by generating a surplus capital.[7] To the defenders of the East India Company the usual argument in favour of the Indian textiles was that the demand for them was rapidly increasing in Europe and at home; a demand that was met much more cheaply by the low-cost products of Asia than the comparable European fabrics.[8] Even the Christian piety of Thomas Mun which had caused him to condemn the use of calicoes as unsuitable for Christendom, being the manufactures of 'Infidels', was not sufficient to blind him to the economic fact that they helped to reduce the high price of cambricks, lawns, and other kinds of linen cloth.[9]

The public controversies in England which surrounded this particular branch of the Company's trade at the turn of the seventeenth century can be looked at as being part of a strong lobbying tradition in which the welfare of the producers and the consumers and the interests of the various economic sectors were continually being pitted against one another.[10] The government's tariff policy, on the other hand, while reflecting the need to assuage public anxiety, was strongly inspired by urgent fiscal needs. The clamour for protection against the competition of Indian textiles has perhaps concealed to some extent the transformation of the English tariff structure between 1690 and 1704 from a low-level fiscal system to a relatively high-level one, the main object of which was to provide the government with sufficient revenue to finance a costly foreign policy.[11] The Company on its part betrayed little real concern at the restrictive measures that were being erected against its textile imports both at home and on the Continent.[12] From the beginning of this trade in the seventeenth century, these imports were marked by an extraordinary product differentiation which cushioned the effect of the prohibitions. When one type of textiles was banned the Company could always turn to the other varieties, and the re-exports to the eastern Mediterranean, Africa, and the New World probably absorbed a large proportion of goods previously imported for domestic consumption which were prohibited after 1700. So far as the Company's textile trade was concerned, the cause for anxiety arose not so much from the direction of official or legislative interference as from the operation of

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normal but highly unstable market forces and environmental conditions, to which were added the difficult management problems internal to the Company's own decision-making and operational units.

The magnitude of these problems can be gauged by raising a series of questions which must have confronted the Company's managerial committees in the practical day-to-day conduct of trade. For example, how was the Company to know exactly the total number of piece goods it could sell in its quarterly auction sales in London? By what method was the annual list of orders to be drawn up for despatching to the factories in India and how were the relative quantities to be apportioned among the various different types of textiles? As a period of at least eighteen months was likely to elapse between the time of sending out the list from London to the receipt of the goods, this was an exercise in effective forecasting. But what was to tell the Court of Directors that the present market trends would continue to be operative two years in future? The imbalance between current demand and supply is a perennial problem facing everybody concerned with the production and marketing of goods, but in a distant branch of trade involving a two-year time-lag disequilibrium could become a permanent feature unless adequate inventory holdings were maintained. Such a policy was not costless, and the East India Company needed no reminder about the possible effect on its total sales revenue of a shortfall or an oversupply of textiles. All these problems meant that the Company had to devise decision-rules which served as satisfactory proxies to the ideal, exact solutions. Perhaps the most intractable problems lay at the Asia end of the trade, where the natural hazards of a fluctuating climate were aggravated by the difficult task of extracting compliance to the Company's instructions from an ill-paid and recalcitrant bureaucracy.

In drawing up the annual list of textiles which the Asian factories were to purchase and ship to London, the main guideline of the Committee of Correspondence was the realised auction prices. Though no explicit rule of calculation has survived to tell us what the actual method and criterion of ordering were, the existing records make it fairly clear that the Committee took the differential between the prices at which bids were invited at the auctions and the closing bids, and deflated it by the prime cost. Insurance, customs duties, and freight charges per unit items were next calculated and subtracted from the gross profits. The decision to continue a particular line of goods and the exact quantities to be ordered were determined by the satisfactory measure of these two separate indices. The nominator of the first, the advance on the price set by the Company, was clearly an indicator testing the strength of current demand in Europe, while the denominator reflected movements in costs, both temporal and cross-section, at the supply end.[13] The second index was a simple way of calculating average profits and

making sure that no individual item of textile imports was creating an actual loss.

The sophisticated nature of these decision-rules cannot, however, conceal the fact that they differ considerably from the standard theories on the behaviour of the firm. But the impression of exactitude conveyed by them was to some extent misleading, for here were often very large discrepancies between the quantities ordered and those supplied from India. One result of this accumulated experience of a margin of errors, reinforced by the variations of the sellers' market, was an attempt to compensate the errors through overordering by the Correspondence Committee. The annual list generally contained the names of every type and subtype of textiles imported from the Indies, followed by the quantities required, and sometimes also by specified prices. As the errors were mostly in the direction of shortfalls, the quantities were deliberately inflated, and the year-to-year changes kept at a minimum. When unit costs rose appreciably in India or the bid prices in London failed to advance by a sufficient margin, the types in question were discontinued altogether or pressure was applied on the Company's servants either to lower the cost prices or improve the quality of the fabrics. In an industry characterised by a multitude of small-scale producers, the problem of standardisation and uniformity of quality was naturally an important consideration, particularly if the products were distributed by a semi-central organisation on the basis of world-wide trade. The Company's position as an oligopolistic seller in Europe carried the risk of a serious loss in market share if the quality of its imports varied too much or if the fabrics were actually debased through bad buying. It is no wonder that the list of orders should have contained so many exhortations to keep up the quality of the cloth.

The demand conditions in Europe and the overall trends in total imports

The contemporaneous disquiet over the invasion of markets in Europe by the Indian textiles is readily understandable when account is taken of the strange and alien character of the new imports and the magnitude of the invasion. In 1683 the East India Company requested the Surat Factory to supply chintz printed on finer cloth in order to make it more acceptable to upper-class women, saying that in Holland the Indian chintzes were already 'the ware of Gentlewomen' but here in England 'of the meaner sort'.[14] But four years later the Company could report that all sorts of chintz had become 'the Ware of Ladyes of the greatest quality, which they wear on the outside of Gowns and Mantuoes which they line with velvet and Cloth of Gold'. There were many comments in the 1680s and 1690s on the sudden upsurge in aristocratic demand for the delicate painted cloth from the Masulipatam region, and it was

said that the great ladies in England were prepared to pay exorbitant prices for the superfine muslins of Bengal not seen in Europe before.[15] These observations on the use of cotton textiles are supported by the figures of imports. In 1664 the total quantities of calico imported by the English Company stood at well over a quarter of a million pieces and their value accounted for 73 per cent of the entire trade of the Company. In two decades the first figure had climbed to more than a million and a half pieces and the relative share of textiles in total value had also increased to 83 per cent. As it happened this was an all-time record and induced by abnormal market conditions, which will be examined shortly. Public commentators who watched the soaring upward path of the Company's cotton imports during those twenty years might easily conclude that the trend would continue, and they would certainly have been wrong in making such a prediction. But no one in 1684 was to know with certainty that the imports for this year would not be approached even closely during the next eighty years. The fact that the expansion failed to maintain its momentum at the previous rate may be attributed partly to the saturation of the market and partly to the imposition of heavy protectionist duties culminating in the total prohibition of 1720 for certain categories of textiles. An inspection of the actual import statistics reveals the existence of a number of long movements of twenty to twenty-five years' duration within which there were shorter periods of fluctuations. The long movements can be identified in most cases with periods of war and other major changes outside the control of the Company. The short-term fluctuations, on the other hand, where they were not caused by a failure in supplies, resulting from famines or some other random factors in India, arose from changes in demand and the periodical boom and slump conditions in general European trade.

The first long movement lasted from 1660 to about the middle of the 1680s. This was a period in which calicoes rapidly gained in popularity, and the total extent of their market at home in England and on the continent may well have reached its possible limits during those years. In the early part of the seventeenth century the use of calicoes in Europe was mainly confined to household functions, serving as table and bed linen and house furnishings.[16] In the latter half of the century their acceptance as clothing material rapidly caught up with the demand from soft furnishers. As J. Cary commented in 1699, 'It was scarce thought about twenty years since that we should ever see Calicoes, the ornaments of our Greatest Gallants . . . when they were then rarely used.'[17] Although part of the rising new demand probably came from the substitution of cotton for the traditional non-wool fabrics manufactured in Europe, much of it must have been additional to the existing consumption, generated by the utility and novelty of the Indian pro-

ducts. The lack of definite proof for this statement is tempered by the observable rate of expansion which was much too rapid to have been accounted for by substitution alone. The premium paid for new and original designs in fabrics and the demand for constant novelty was so great that the Court of Directors laid it down as a general rule that, in providing all kinds of flowered silk goods, the fashion and design should be changed every year as much as possible, because English, French, and other European ladies would give twice as much for a new 'thing not seen in Europe before' than for silk of better quality which had been in use during previous years.[18]

The statistical analysis of the relationship between the price and quantity of textile imports, carried out in Appendix 3, demonstrates that from 1664 to 1683 the coefficient of elasticity for Madras and Bengal textiles was as high as 2.7, while for western India the price variable hardly had any impact on quantities. The position was reversed in the period from 1710 to 1745. The Coromandel and Bengal textiles declined in the value of their price elasticity coefficient. Imports from Bombay in the latter period exhibit an elasticity of 2.3. These quantitative tests strengthen the conclusion that the market for new and finer textiles which were supplied from southern and eastern India continued to grow until the turn of the seventeenth century under the double influence of a shift in consumer taste and price advantage, and thereafter the total consumption reached a maximum ceiling. Western India was an area of lesser importance for the Company's textile trade in the first half of the eighteenth century, and the members of the Court of Directors showed themselves highly sensitive to price variations for cloth imported from Surat. Within this general development there were considerable annual changes, the existence of which is betrayed by the statistics of imports as well as the comments made by the Company in its instructions to the officials in Asia. The type of short-term instability which accompanied the Company's textile markets can be seen clearly in a detailed analysis of the figures of imports during the years from 1664 to 1690. Though the upward trend was very much in evidence from 1661 (as shown by the orders list Figures 21 and 22), the real growth in imports did not begin until after the second Dutch war. In fact the total imports of piece goods during 1666 and 1668 respectively fell to the lowest level ever reached in the whole of our century, and in August 1664 the Court of Committees informed the Surat Presidency that the imminence of war with Holland and the uneasy future could cause the Company to curtail its investment and send only one ship to that part of India.[19] However, the orders began to increase from 1667 and by the early 1670s the boom was really under way. Part of the difficulty experienced by the Company in co-ordinating the supply with demand of course lay with the problem already mentioned, the time-lag between

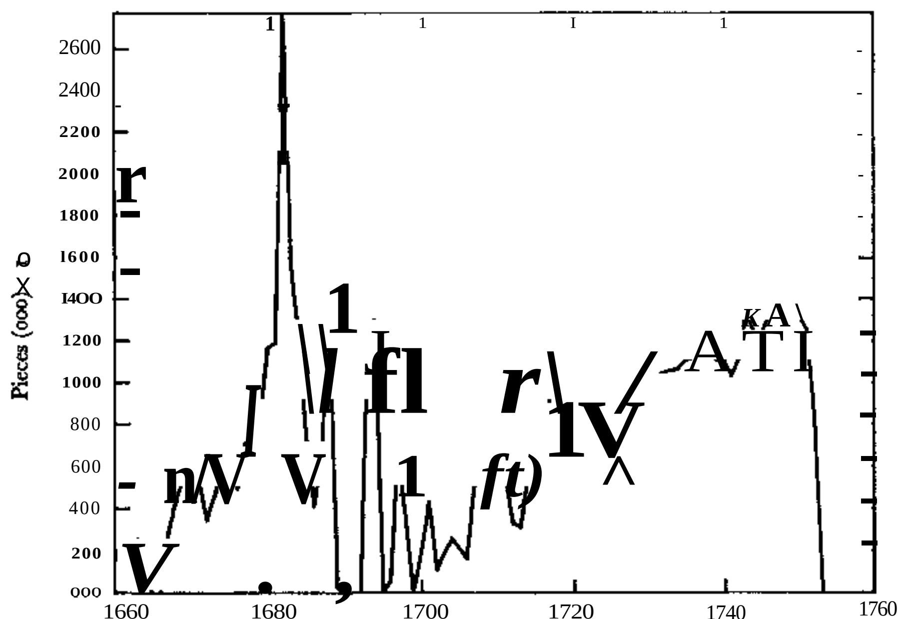


Figure 21. Total textile orders.

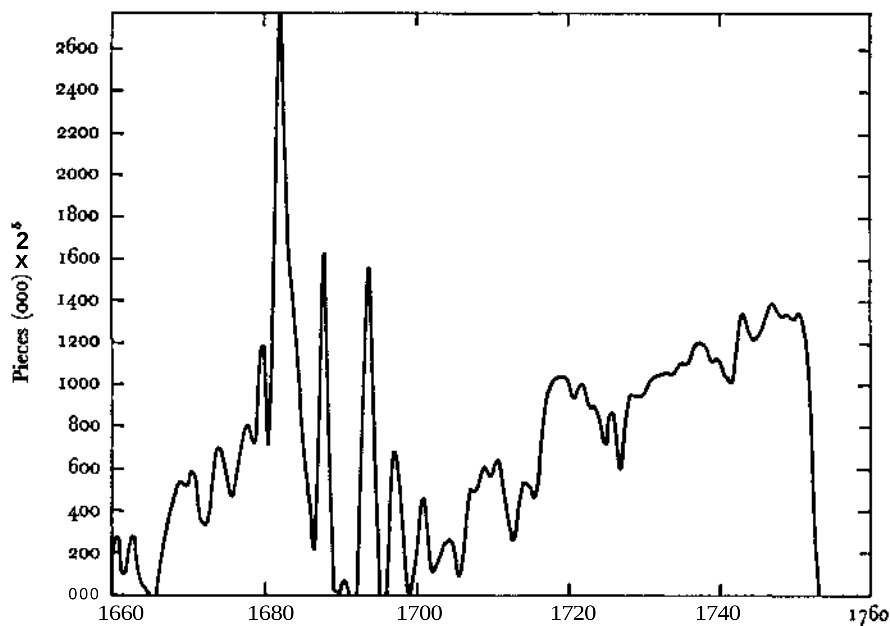


Figure 22. Total textile orders: polynomial trend.

the receipt of the orders in India and the arrival of the goods in London. In 1672-3 a temporary break occurred when the European markets were reported to have been flooded with East India goods.[20] In their letter of 29 September 1673 the Court of Committees had advised the Indian factories of the depressed market at home, but it was only in 1675 that the reduction in the annual list was reflected in the smaller volume of imports.[21] In the meanwhile the orders for 1674 were greatly enlarged, which caused the imports also to increase in 1676. By this time the Company was no longer certain that the supplies were in balance with the demand, and a despondent Court was forced to admit in June that the large amount of goods recently imported from the Indies could no longer be sold as profitably as before.[22] 'For some years past we have endeavoured to drive as full a Trade for India as the market in Europe would bear,' the Company commented, 'not onely for our own advantage but for increasing the Trade of the Nation and therefore have sent out Stock and advised for the preparation of goods accordingly. But we now by experience finde that should we continue the bringing home such quantities as we do expect and have advised for, we cannot possibly have vent for them in Europe, especially considering the Competitions we have in that Trade and the great warrs and troubles that are in these parts of the World.' The Committee realised that the preparations for investment already under way in India and the number of ships expected from Asia could not be cancelled or reduced during the current season. But the orders for the following year were cut back by nearly 100000 pieces.[23]

After this brief down-turn, the amplitude of which was relatively small (see Figures 23 and 24), the upward trend in supplies was resumed, reaching a peak in 1684. The Madras Council was specially reminded in 1681 that the new kinds of textiles available in Bengal were likely to find so good a market at home that the trade of that province could be rapidly enlarged within a few years provided the Company's servants well cultivated the seed planted by the Court.[24] It was not only the buoyant demand which had caused the textiles orders to exceed one million pieces in 1680. With the rise of interlopers and the challenge to its monopoly by private English traders, the Company was seriously alarmed and began to look for an effective commercial policy to counter the threatened danger. On this occasion the method chosen by the Company to fight competition was the traditional weapon of an oligopolist, a trade war. There can be little doubt that Sir Josia Child and his faction were the moving spirit behind its formulation. In March 1682 the Court of Committees was writing to Madras that the Company had resolved to increase its imports from all the factories in Asia and the goods were to be sold at cut-prices so that by 'over trading and under selling' the 'unreasonable itch' of the interlopers might be put to an end

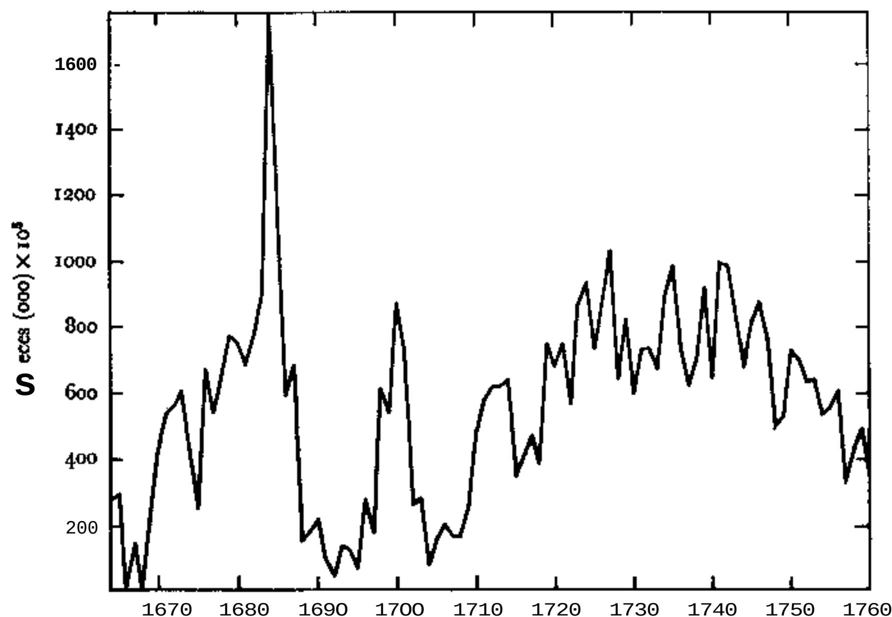


Figure 23. Total textile imports.

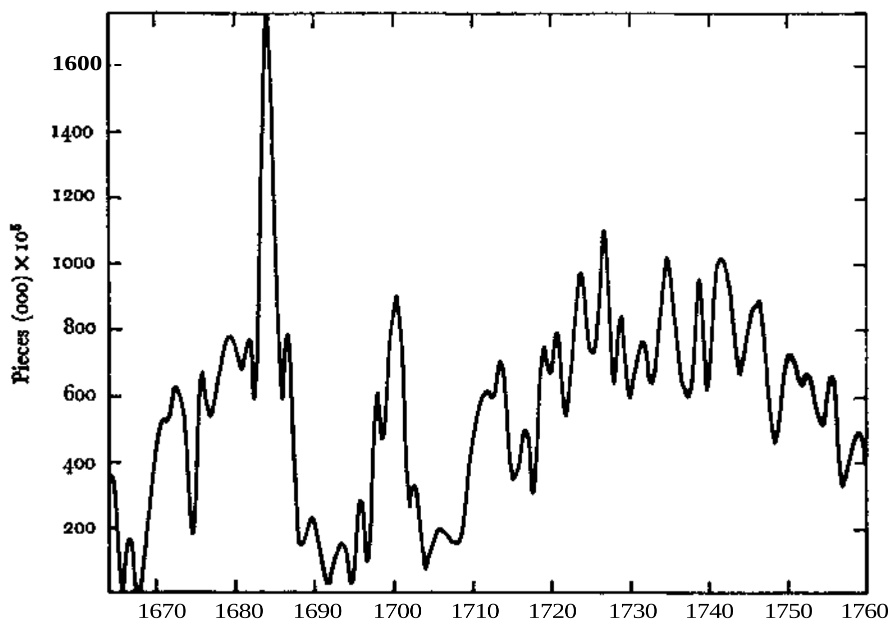


Figure 24. Total textile imports: polynomial trend.

for once and all.[25] In a private letter to William Gifford, the governor of Fort St George, Child re-emphasised the point and at the same time urged Madras to try and diversify the composition of the goods, which, he hoped, would prevent the market from being glutted.[26] Similar instructions were sent both to Surat and Bengal, and the total quantities ordered in 1682 rose to 2.8 million pieces.[27]

Child's letter to Madras reflected also the Company's evident desire to popularise the use of Indian cotton both among the ordinary people and the members of the gentry. It was rare for the Governor of the Company himself to instruct the Chief of a settlement in India about the quantities and types of textiles that were to be sent home. But Child asked GifFord to buy 200000 shifts ready-made in different grades of calicoes, fine and coarse, as he thought that this was the only way to 'introduce the using of Callicoe for that purpose in all these Northern parts of the world'. For seamen and ordinary workmen, the shifts were to be made from strong blue and white cloth; for citizens, from 'white midling'; and for ladies and gentlewomen, in fine white cloth.[28] The social distinctions, carefully underlined in the letter, probably point to the existence of discriminating tastes on the part of the buyers and explain the enormous range of the imports. But, however active the demand, the Company could hardly have been unaware in 1682 of the economic effect of an expansion on the scale it chose to adopt. The policy of driving off the new entrants in the trade by over trading was deliberate. Nevertheless by the end of 1683 before the imports had started to come flooding in, a note of surprise crept into the Court's letters at the impact of the large supplies. 'We have found the Company's commodities so miserably depreciated by the infinite increase of our own and others permissive trade, that we have found it necessary to make a self-denying order,' one of the letters recorded while prohibiting the servants from private trade.[29] During the next two years such complaints reached a crescendo. The Surat Factory was advised in 1685 not to send more than what was asked for, as the warehouse was full of unsold piece goods. A few months later Madras was informed that the Company had such a vast quantity of various cotton goods on its hands that it saw no necessity for further supplies until the European markets became stronger than what they had been in the past few years, especially in view of the fact that most of the interlopers had been effectively suppressed.[30] In fact with the elimination of competitors the Company was strenuously attempting to restore the old margin on sale prices, which in the intervening years had fallen to a level barely sufficient to cover the prime cost, freight, and other charges.[31] It was perhaps fortunate for the Company that the impending war and political conflict with the Mughal Empire in India was working towards the drastic reduction in supplies that was to take place during 1687-92. Even so in

December 1686 the Court was still complaining that the sale of Indian textiles continued to be sluggish, and part of the blame for the poor sales was put on the arrêt of Colbert which imposed excessive customs duties and other restrictions on the import of East India goods into France.[32]

The expansion of the 1680s was the apex of a long-term swing in imports that had begun some twenty years earlier. Even without the feverish market conditions generated by the East India Company's fear of interlopers, it is probable that the upward movement would have continued, though at a slower pace. The severe depression which resulted from the sudden doubling of the quantities may not have occurred. The Company's letters to India in 1681—2 mention only the emergence of competition and the favourable demand at home as the reasons for the increase in orders. But it is possible that there were other considerations involved. For some years the reports from India had been pointing to a rising commercial and political friction between the Mughal officials and the Company's servants. When Josia Child became Governor of the Company, his unconcealed admiration for the Dutch methods of trade from fortified territorial bases turned the chances of a showdown with the Indian Empire almost into a certainty.[33] Whether the actual events in India were the outcome of deliberate policy or not, the strategy at least required the building up of a sufficient warehouse inventory to withstand the effects of a possible war and interruption to supplies. That some such policy was in Child's mind is evident, for he was writing to the War Council in India in February 1687, 'We have been preparing these 4 or 5 years, by filling our Warehouses with all sorts of East India Goods to our infinite Cost and charge of warehouse roome, watchmen, and interest of our Stock, well knowing our inability to stand upon our rights in India with empty warehouses at home, and now if we should tamely submit to dishonourable termes, our great store of Goods would be but as a dear bought prize in the hands of fools that know not how to make use of it.'[34] From this statement about the relationship between the creation of a surplus stock of Indian goods and the policy towards war in India, we cannot be absolutely certain which was the cause and which the effect.[35] But it does reveal the existence of an inner decision-making process that was fully oriented to the analysis and solution of complex situations.

The actual imports of cotton piece goods remained depressed in absolute terms during the decade following the Mughal war of 1688-9. It took some time for the interruption to trade to make its full impact. The lowest point in the downward movement came only three years later. At home the market, however, was changing dramatically for the better, and the continued shortfalls in supplies had serious economic implications for the Company. A comparison between the imports and

the orders sent out from London shows that from 1687 they were moving in opposite directions, and the demand in London was so great that the annual lists were suspended altogether for four years in the early 1690s.[36] If Child and his fellow members of the Court of Committees had hoped that the large stocks accumulated during the immediately preceding years would see them through the crisis, they were soon to discover their mistake. The market soon went from one extreme to the other. By the spring of 1689 the stocks of cotton goods were seriously depleted in London, and the Court was urgently writing to India that all kinds of textiles from Surat, the Coromandel coast, and Bengal should be sent home until the warehouses were replenished again.[37] The shortage occurred at a time when there was an apparent change in fashion favouring the use of Asian cotton and silk fabrics. The combined effect of the reduction in supplies and the possible upward shift of the demand curve was an unparalleled rise in prices. The average sale price of the Company's textiles auctioned in London, which had stood at £0.77 per piece in 1688, jumped to £1.24 in 1689 and to £1.80 a year later.[38] These prices and the very high margin of gross profits explain the evident concern of the Company at the failure of the Indian factories to keep up the supplies. In 1690 it was being reported from London that all 'sorts of Bengal goods are now exorbitantly dear in Europe' and it was confidently predicted that the demand for the 'Commodities of Indostan' was likely to continue strong 'by reason not only of our long War in India but also because the Dutch ships this year have brought home very inconsiderable Cargoes'.[39] While the general rise in the level of English prices in the 1690s was largely inflationary, caused by the deterioration of the currency, the real gain to the Company of the improvement in the sale price of textiles continued. The average mark-up on the total textile imports was in the ratio of 1:3.85 between 1695 and 1704.

The strong demand and the favourable market in Europe was not something which the Company expected to last indefinitely, for already in 1699 the instructions given to Sir Charles Eyre, the newly appointed President of the Company's trading factories in Bengal, had voiced doubts on the continuation of the high selling prices at home. The Court was aware, the commission stated, that for several years the general scarcity of East India goods had caused them to sell at high rates of profit at the candle. But looking to the future, the Company must assume that once the full imports by all the competitors in the trade were resumed the market would once again be glutted with various kinds of Indian textiles. If that happened the candle would only sell what was most original and best in quality.[40] The periodical analysis of the probable course of the market, of which this was one example, ensured that the possibility of imbalance arising from the long time-lag

between effective decisions and their implementation was kept at a minimum, and such exercises were an integral part of the Company's management methods. For an organisation as large as the East India Company, operating through a complex chain of delegated control, commercial miscalculations carried high financial risks. This could be reduced only if the agents at the purchasing end were continually kept informed of the changing state of the market at home. There was nothing that disturbed the Company more than the thought of losing its market share to competitors either through overpricing or the inferiority of design and quality of its products. In the true tradition of a monopolist the Company looked to product differentiation as an answer to both the problems.

Before we turn to an examination of the trends and fluctuations in the Company's textile imports during the eighteenth century, it will be convenient to discuss first the two other components of the time-series, the regional distribution of the imports and the price movements, taking the dividing line once again at around 1700. In 1664 the base year of our study, Surat provided 50 per cent of the total quantities and 35 per cent of the total value of the textiles imported by the Company. The share of Madras was 41 per cent of the volume and 48 per cent of the value, while that of Bengal came to 9 and 17 per cent, respectively. These calculations bring to light certain characteristics of the regional composition and distribution of the goods that were to persist virtually till the end of our period. It can be seen at once that Surat specialised in supplying low-cost coarse textiles in relation to Madras and Bengal. The price of Bengal cotton piece goods was nearly twice that of Gujarat and the Madras cloth was a third higher. The pattern is a little different in case of sale prices in London. The mark-up on Surat textiles in 1664 stood at 1:2.48; on Madras goods it was 1:2.75 and on Bengal only 1:1.56. If these ratios are taken as a guide to profitability, then it is clear that Surat still occupied an important place in the Company's investment decisions. But Madras was obviously the area which held out the most promise for expansion. The performance of Bengal was disappointing, and in December 1664 the Court complained in their letter to Bengal that the cost price of these textiles was far too high when account was taken of what they fetched in the sales.[41] In 1664 the total sales revenue from Indian cotton goods was £216 836. Out of this the share of Madras textiles was 58.7 per cent followed by Gujarat at 31.1 per cent and Bengal at 10.2 per cent.

While the share of Bengal in total trade did not begin to rise markedly till after 1680, Surat continued to supply more than half of the total quantities in this period, though it was Madras which claimed the chief share in term of value. The general trend in average cost price was distinctly upward from 1664 to 1688. After a precipitate fall during the

war years it began to rise again from 1694. The very high level reached in 1666 and 1668 was certainly due to some freak conditions brought about by the naval war with Holland, but even during the following decade the graph betrays considerable alternating annual movements. The rising trend which manifested itself in the 1670s did not go unnoticed and it provoked a debate between the Court and its servants in India which was often acrimonious in nature. There is hardly any doubt that the Company regarded the level of cost price when equated against the relative quality of the fabrics as a key to the successful maintenance of its market share. As the force of competition from the Dutch and the French increased in the textile trade, there was a corresponding pressure on the Indian factories to reduce prices. The general policy was clearly laid down in a letter to the Madras Council in 1670. The Company announced that the Dutch had in the previous year imported 50000 pieces of long cloth from the coast of Coromandel. Adding to these figures the imports of the French, Danes, and the Portuguese, it could be seen that the keen competition was likely to depress the margins of profits, and for the English Company to reduce the volume of its imports and sell dear would be merely to play into the hands of the trade rivals. Therefore the only way left open was for the servants in India to make the 'utmost endeavours to procure that which is good, in the severall sorts and at the cheapest rates'.[42]

The quantities of cotton textiles sold by the Dutch Company during the quinquennium 1669-74 in Amsterdam indeed show a very substantial increase over the previous period, which probably explains the extreme sensitivity of the English merchants to the forces of competition.[43] By 1674 the factors were being continually urged to improve the quality of the fabrics and it was stated that both the Dutch and the English Company now sold their respective imports in the same markets in Europe. If the goods handled by the English Company did not prove as good as the Dutch, 'theirs will sell and ours find little vent as not being fitt for those marketts whither they are usually sent'.[44] The answer of the Surat Factory to similar exhortations and the response of the Court of Committees shows a curious state of confusion about the actual strategy to be followed in buying the textiles in India, and it can be reasonably suggested that in spite of the Court's awareness of the problem confronting potential oligopolists there was no clear conception how exactly it was to be tackled. The true cause of all these difficulties experienced in both buying and selling lay with the multiplicity of the textile types and the variations in quality even within one particular category of goods. The comparability of prices under such conditions was difficult to establish, since the wide diversity of products turned all importers of the Indian cotton goods into monopolistic competitors (for the weighted average of cotton textile prices, see Figures 25 and 26).

But the market share of individual groups of traders could be retained only if the quality of textiles in a common band of price ranges did not vary from year to year in relation to what the others were offering. Although the Court of Committees could not predict in which direction the prices would move in the sellers' market, given the competitive situation created by the Dutch and other European imports, and therefore was faced by indeterminacy in price and output policy, it could achieve the more limited objective, the maintenance of the market share, by approaching the problem from the end of quality control and standardisation.

It is easy to see that the general trade depressions of 1673 and 1676, the increase in competition on the Continent, and the upward pressure on cost prices should have produced an atmosphere of crisis and anxiety even though the actual facts did not always justify it. In 1675 the March sale proved particularly bad for Surat goods and an analysis of the auction prices led the Court to conclude that, besides the wars in Europe, the reason why these textiles did not find a better market must be assigned to the bad sorting and the debased quality. The Factory was warned unequivocally that unless the fabrics showed an improvement in price and texture, the quantities imported from Gujarat would be drastically reduced, as the Coromandel cloth was both better and more profitable to the Company.[45] The Company was convinced that the price elasticity of demand for Indian textiles was high in Europe and that a reduction in selling price would effect a corresponding increase in consumption.[46] But it may be asked how far were they right in assuming that by merely instructing their servants in India they could bring about a fall in the supply prices there. By 1679 the Surat Council was tired of the repeated complaints, threats, and pleas which had followed from the early part of the decade and decided to enlighten the Company on the economics of competition that could conceivably exist in the buyer's market. 'As to the prices of goods sent from hence,' the Council wrote, 'if they prove dearer than heretofore, it lyes not in our power to prevent, the Markets of these Countryes governing not by our Investments, but by such contingencyes as are accustomary in other places.'[47]

The boom of the 1690s in the demand for East India products muted for a time the Company's chronic complaints about cost prices, and it was not until 1700 that the Directors returned to the old style of persuasion and exhortations.[48] To the familiar theme of profit levels was now added two additional ones, the high price of silver in Europe and the new duties on finished imported calicoes, which made necessary the reduction of cost prices in India. In 1700 the textile imports of the old Company alone amounted to 868095 pieces. But in spite of the revival in supplies, several forces unfavourable to the Company were converg-

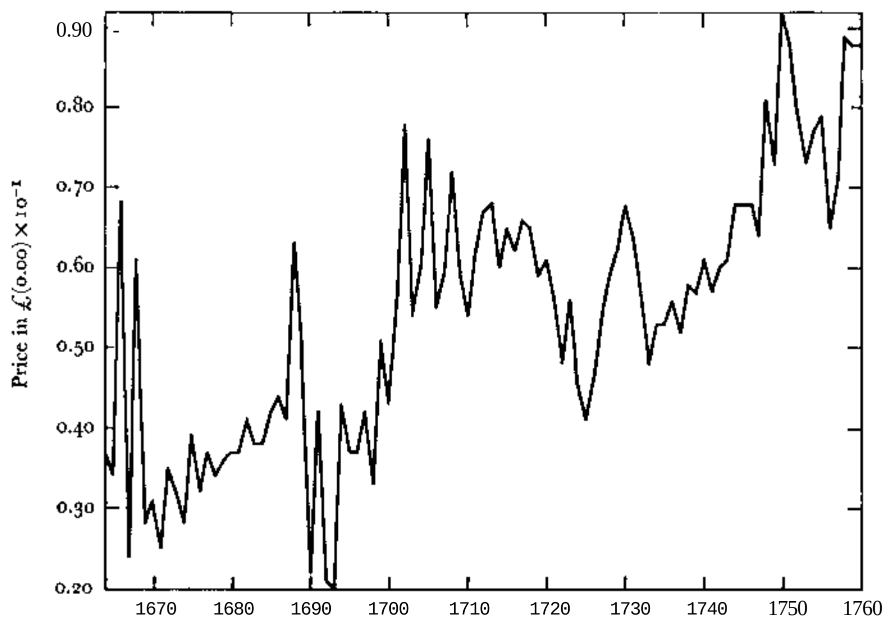


Figure 25. Total textile price: weighted average.

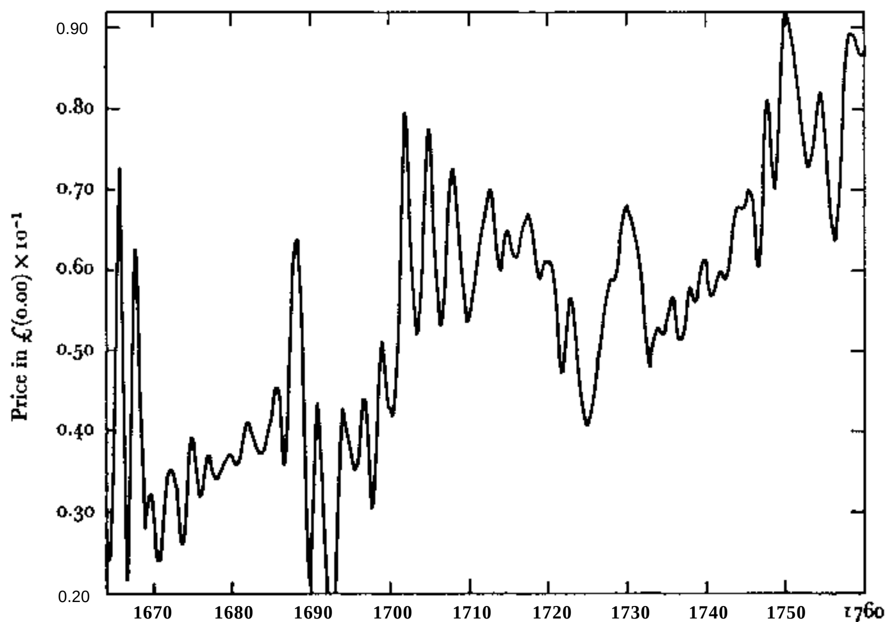


Figure 26. Total textile price polynomial trend.

ing from contradictory directions. As the Company made its operating profits largely from the sale of imports, the effect of the rise in the price of silver on its finances was the same as a devaluation of the national currency. The cost of the imports in terms of domestic prices rose in the same proportion as the rise in silver. In 1705 explicit references were made to the difficulty in procuring silver and the servants were once again urged to exert themselves 'to the utmost in procureing goods as cheap as possible in the circumstances we are now'.[49] The crisis in silver supply was not the only source of disquiet the Company had to suffer. The long and indispensable support it had enjoyed from the government seemed to be weakening under the pressure of a concerted public campaign against the Indian imports. The establishment of a separate East India Company in 1698 and the competition that followed in India placed both the buyers in a weak position in relation to the sellers. This was a development that was most unwelcome to the economic tenets of an organisation that was accustomed to exercise some degree of control over both the buying and selling markets. But pressure from dissident fellow merchants in the City was something of which the members of the Old Company had long experience, and they dealt with it in the classic manner of would-be-monopolists - by a merger. A much more serious challenge was the evident sign of opposition which was gathering in parliament.

As early as 1697 a report from the Commissioners of Trade and Plantations had recommended that suitable policy measures should be taken against the export of bullion by the East India Company and for protecting the domestic textile industries from damage caused by the use of East Indian cotton and silk goods.[50] Until 1685 the Company had paid the usual revenue duties on its cotton piece goods, which were charged at the same rate as linen and varied between 9d and 3d per piece.[51] In this year additional duties of 10 per cent *ad valorem* were imposed by parliament.[52] The object of the new imposition was ostensibly to raise extra revenue to finance James IFs campaign against the Duke of Monmouth, but already the tariff on East India goods was taking on a protectionist character. By 1696 the great debate conducted so far mainly in pamphlets had come to a head and pressure for positive action from clothiers and silk weavers was becoming difficult to resist. Bills for restraining the imports of finished cotton and silk goods were introduced in the House of Commons in 1696 and 1697, but were abortive on both occasions. It was not until April 1700, almost three years after London was the scene of violent rioting by the Spitalfields silk weavers, that an Act (11 & 12 William III, c. 10) was finally passed, prohibiting the use or wearing of 'all wrought silks, Bengalis, and stuffs mixed with silk or herba, of the manufacture of Persia, China, or East India, and all calicoes painted, dyed, printed or stained there'.[53] In order to encourage

the merchants engaged in the calicoe trade, the duty hitherto levied on Indian textiles was reduced by the same amount as the drawback allowed on re-exports, but at the same time a fresh duty of 15 per cent was imposed on the gross sales of all kinds of silks, muslins, and calicoes imported by the Company.[54]

The Company's attitude to this penal legislation was that the parliament had imposed a tax on the nation by obliging the public to buy the prohibited articles at prices 50 to 100 per cent higher and the Directors found it difficult to imagine that the prohibition would long continue. But they were also astute enough to see that the banned goods paid no customs other than the 2.5 per cent half subsidy, which made it economic to hold them in the warehouse to await a market. Even if the prohibition were to be continued, it was confidently predicted that the foreign markets would take off what was bought in India and China.[55] The reference to the increase in prices was significant though the exact meaning of the Court is not clear. Was it being suggested that the full amount of duties would be passed on to the consumers or that in spite of the prohibition these goods would continue to be demanded and sold at black market prices? We know that the Company was perfectly aware of the economic relationship between taxation and prices. For in 1689 the Court, when discussing the policy on levying customs duties on the trade of Madras, had observed that though the traders disbursed the customs in all countries, it was the consumers of any commodity who in the long run paid them.[56] The immediate effect of the new Act on the Company's textile trade is difficult to measure. In 1700 the Surat Factory was instructed to send less chintz and more white goods, which could be printed in England by local calico printers whose workmanship was considered to be equal to or better than that of the Indian printers.[57] By 1705 as parliament was about to impose yet another round of duties on the import trade, some of the earlier confidence at the transient nature of these levies had disappeared, and a disheartened Court was writing to Madras that though it was planning to oppose the proposed legislation, previous experience had taught it not to expect much success.[58]

The increase in imports in 1700 was the delayed effect of the vastly expanded orders which had gone out to India during 1693-8, but for the next ten years both the orders and the imports remained at a low level. We cannot be certain that the stagnation was the result of the prohibition Act and the imposition of new duties. Rather it was a combination of the legislative measures, the resumption of the continental wars, and the bullion shortage that caused the crisis of confidence. 'We believe you are not insensible of the reason,' the members of the Court of Managers wrote in 1705, 'why we have and do this year again send so small a stock, vizt. the General Complaints of sending out Silver during

this War (not considering the advantage it otherwise brings to the nation) which necessitates us to restrain ourselves.'[59] Another letter dated two years later dwelt on the effects of the duties, 'We should be glad if you could buy Longcloth and Sallampores at much easier Rates. Unless you do so the heavy duties on them will quite drive us out of the trade for as the case stands they do not clear what will pay Interest and Insurance.'[60] The Company left the Fort St George Council in no doubt that the Madras textiles were becoming unprofitable relative to Bengal and regretted that a factory which had hitherto occupied a premier position in the Company's overall trade should have to undergo a retrenchment in investments. But as the Company was a corporation of merchants, and merchants were economic beings, it had to deal in commodities that made a profit and not a loss.[61] The analysis of sales figures carried out by the Committee of Warehouses revealed that the Bengal goods yielded profits twice those on the Madras types, and Bengal was able to supply textiles that could act easily as substitutes to the coast goods. The Committee suggested that the rise in prices which had taken place in Madras over the previous few years (1705-8) and the difference between the latter and Bengal could not be explained by the differential cost of wage goods alone.[62] There was either actual corruption or at least negligence among the Fort St George Council. These internal evaluations of the relative profitability of the Company's trading areas in India reflected the major structural changes that its textile trade was about to undergo in the early eighteenth century. The temporary crisis of 1708 provided an occasion to reiterate the basic economic facts of the East India trade, that the Company's 'investments were the Main spring from whence the Supplyes must come that can enable us to bear the great charge we are at both at home and abroad and run the risque of such long Voyages'.[63]

The change in the regional balance of textile imports was not long in coming. In 1710 the share of Surat in total quantity of imported textiles was 25 per cent, that of Madras 28 per cent, and Bengal held the top position with its share at 47 per cent. Between 1728 and 1760 the high-quality and expensive fabrics of Bengal accounted for 60 to 80 per cent of the total number of pieces. During the half a century following the Treaty of Utrecht (1713) the East India Company's textile trade appeared to have reached a state of comparative stability. Though still susceptible to considerable annual fluctuations, the graph does not exhibit the kind of violent movements which characterised the imports in the seventeenth century. Even the second prohibition Act of 1720 failed to depress the trade substantially, as by this time the Company had already adjusted to the restrictions created by the previous legislation, and the new Act was directed more at the surreptitious consumers than at legitimate traders.[64] It is true that the general direction of the

annual orders, after reaching the figure of one million pieces during 1718-20 turned downward in 1721 and continued to decline until the lowest point was reached in 1727. But the fall was gently progressive and its cause probably lay with the business crisis created by the bursting of the South Sea Bubble.[65] While the annual list was being cutback, the actual imports were increasing, and by 1730 the Company was seriously disturbed at the continuing discrepancy between what was asked for and what the servants supplied from Asia.[66] However, demand began to rise once more from 1731 and for the next two decades remained at a fairly high level. Looking at the curve of the smoothed series (Figure 24), we can discern five oscillations of an average duration of seven years. In the last decade the total quantities fell as a result of wars in India and the Western world. But we cannot any longer compare the imports with the orders, as these were not included in the General Letters to India after 1752.

The operation of the short oscillations during 1720-50, which the actual time-series brings to light, is also confirmed by the Company's frequent qualitative appraisal of the European market, and after the necessary adjustment is made for time-lags the cycles can be broadly related to these variations in demand. The process that gave rise to the cyclical fluctuations is of course another matter, and in seeking an explanation account has to be taken of factors internal and external to the Company's operating conditions. The negligible part played by fixed capital in the pre-modern textile industry, whether in Asia or Europe, rules out what has been the most potent cause of regular oscillations in industrial output. An internal mechanism very similar to it was operating so far as the Company's textile imports were concerned (see Chapter 5, p. 89). As for the impact of external factors, the reason for the regular fluctuations in demand is more difficult to find. It is probable that a dynamic sequence was generated by the influence of stock-building and a replacement pattern similar to that in the case of semi-durable articles today. Theoretically the demand for cotton textiles can be broken down into two components, the replacement of existing stock and net growth in consumption. There is no information on how often the cotton goods needed replacement, but if we assume that a piece would have lasted from six to eighteen months one would obviously get a cyclical pattern of consumption.

The first distinct oscillation which lasted from 1720 to 1730 with a peak in 1727 was certainly caused by the Indian factories disregarding the Company's instructions in the first place. We have already referred to the reduction in orders beginning in 1721. But for a number of reasons both Bombay and Calcutta continued to increase the supplies to London. Just how great the excess was can be gathered from the fact that whereas the imports generally varied from 60 to 90 per cent of the

total orders (lagged by two years), in 1726 and 1727 they were 102 and 143 per cent, respectively. The Court's disapproval of such poor performance to specific instructions was expressed in no uncertain term. The Surat list was drastically curtailed, and the coloured piece goods were prohibited for the time being, as their sales revenue at the candle scarcely cleared the prime cost.[67] The most severe censure was reserved for the Bengal servants. The bad quality of the goods and the excess quantities had caused the Court to reprimand the Calcutta Council in 1727 and reduce the list. However, from as early as 1723 the Committee of Correspondence was expressing surprise at the volume of goods which the Council had contracted for in advance with the merchants.[68] When the earlier remonstrances went unheeded or were countered by unconvincing replies, the Court ordered the Calcutta President, Henry Frankland, to be dismissed from the Company's service in 1728.[69] Under his successor John Deane also there was no marked improvement, and by the end of 1731 the financial losses suffered by the Company as a result of receiving unwanted textiles from Bengal were so great that there was even a public clamour in the City against employing such corrupt servants. In order to defend themselves against adverse criticism in the General Court, the Directorate recommended that the President and four other members of the Bengal Council should be suspended.[70]

This particular episode illustrates the dislocation which unwanted or unsuitable goods could cause to the Company's trade even when the market was rising;[71] for the demand for cotton goods had become stronger by 1731, and the small imports of long cloths and sallampores from Madras during the previous two years had led to rising prices for this type of cloth in Europe.[72] The boom conditions affected even the orders for Surat textiles which had remained depressed since 1729. But it is also clear from the events of the 1730s that there was a great deal of instability in the West African trade, the main outlet for the piece goods of Gujarat. While there was a keen demand for these goods during 1731-3, at the end of 1734 the Company was reporting a falling off and in the spring of the following year the orders for Surat textiles were cut down as the Guinea trade was said to have been still very low.[73] The total demand from London, however, continued to increase until 1737, when it stood at 1209800 pieces. The auction prices fell by an estimated 10 per cent in 1738.[74] This turned the rising trend in orders which remained depressed until 1742. The Surat goods sold well in the autumn sale of 1743, and in 1744 the demand for fine textiles was reported to be exceptionally strong in Europe, though by this time the virtual discontinuation of the West African trade because of the war had began to affect the sale of Gujarat goods badly.[75] Even in 1748 the Guinea trade was still dull, and the Company instructed the Surat Factory not to exceed the total quantities of piece goods asked for.[76] But even in these

years the overall demand for cotton textiles must have remained high in Europe, and by 1750 it was unusually buoyant, which explains why the total orders during 1743-51 reached a level never before surpassed in the eighteenth century.

Guidelines to investment decisions

In the comments made by the Court of Directors on the course of the market at the selling end, we find striking corroboration of the existence of a cyclical pattern of demand, an existence that we already suspected from the movements in total quantities. Related to the question of an unstable or oscillating demand, there was a host of other problems in marketing, pricing, and the co-ordination of the purchases in India with the annual lists, on which the Company's managerial committees had to lay down practical guidelines. The fundamental problem to which the Court had to address itself was the question of how to establish a causal relationship between the sale prices in Europe and the cost price in India. For experience dating from the seventeenth century proved beyond any doubt that the two were only remotely connected and could often move in opposite directions. But the sale price and its ratio to the price paid in India were the only true indicators on which the Company could base its decision on quantities to be ordered, after taking into account fixed costs such as establishment charges, freight, and customs duties.[77] The formulation of the decision-rules was quite explicit and the actual guidelines were repeated many times in the letters. In the late 1720s the increase in the prime costs of its textiles, combined with the declining profitability at home, convinced the Company that its servants in India could no longer be relied upon to perform the orders sent out and that fresh injunctions were needed if the home trade was to be conducted with any advantage. The dismissal of Henry Frankland in 1728 was accompanied by the explanation, 'We have already complained of the dearness or badness of the goods in general received this last year from Bengal which gives us so great uneasiness that we think absolutely necessary to change hands.'[78] The difficulty experienced by the Directorate in controlling its bureaucracy in India was responsible in these years for the most clear statement of policy on the purchase of the investment goods. For some time past the Indian settlements had been urging the rise in the price of raw cotton and food grains as the main reason for the increase in textile prices. The Court was prepared to allow such claims up to a point, but there was a persistent suspicion that these were specious excuses for an underhand cover in which the servants made a private profit by inflating the invoice costs.[79] In 1730 the Correspondence Committee carried out a detailed review of the Company's textile trade, and the resultant report,

sent to Bengal, gave the opinion of the Committee on the rising prices. 'It is with great concern we are necessitated to say that the causes for our Remonstrances are abundantly increased by the advance in Price of Goods at your Settlement, and those Subordinate, whereby Labour and Materials are become so dear on your Side of the Line, every year successively enhancing, that they are in a manner above an Europe market, which our Governour and Council ought seriously to take into Consideration, and find out ways and means to bring back your Trade, Merchants and Musters to their old Standards.'[80] During the previous year the Court had expressed surprise that the rise in cotton price should debase the quality of the textiles, and now protested that it could not certainly cause the entire difference, because the latter was greater than the value of raw cotton in two or three pieces of cotton goods. There was no question of depriving the Indian merchants of a 'living profit', but if high prices were to be paid it was only reasonable to expect that the quality should not deteriorate.[81]

What was puzzling to the Committee of Correspondence was the unpredictable behaviour of prices both at home and in India. Goods invoiced at prices differing from one another by 10 to 20 per cent were unexpectedly selling at the same rates in the London auctions.[82] Some textiles would not sell at all even when the offer price was reduced to just the prime cost; while others had to be put up for sale without fixing any price.[83] The sudden and contrary movements completely disoriented the Court's calculations, and their effects were particularly severe in the case of low-value goods. In the section on investments in the General Letter to Surat, the Directors said in 1732, 'We are presented with a very disagreeable account thereof. . . the rise of Cotton and dearness of Provisions is said easily to account for the excessive high Prices of Surat piece goods, but an Advance of above a quarter part in the prime Cost is more than the Europe Market will bear, and will run away with the small profit made on those Goods at the Sale. When we make Demands, it is upon a Supposition that the Goods will be purchased at the Prices then before our view.'[84] The last observation is revealing, for it demonstrates that business decisions were taken on the basis of current or past prices and not on a projection of the previous rate of change.[85] Given the wide separation of the markets and circumstances beyond the control of men, how were the servants in India to be guided in their policy on prices ? It was one thing to specify the quantities of individual variety of textiles which were to be bought but that still left the question of the Company's demand schedule unresolved. One solution was to send out to India copies of the printed sale book which recorded the auction prices, the rates at which the goods were offered for sale, the invoice costs, and the names of places which supplied the fabrics.[86] From this the servants could find out for themselves

the profitability of every type of textile. There is evidence that in the 1730s the Company was seeking to establish a functional association between the sale prices in London and the costing methods at the Asian settlements. From the practice of despatching the sale books along with the annual order lists, it was only a short step to the assumption that the London prices were the true measure of the intrinsic value of the textiles. The Bengal Council were informed in 1733 that, since the goods bought by them were intended for an European market, the prices fetched at the candle ought to be taken as the real indication of their worth. If the buyers in London gave the same price for a piece of muslin invoiced at Rs 10 as that priced at Rs 12, it was surely evident that there could not be all that difference in the quality of the two pieces so as to merit a distinction in the prices paid.[87] Further proof of a similar reasoning adopted by the Committee of Warehouses is provided by the Bengal General Letter of 1736 in which the President was told unequivocably that 'our Sales at home must be the Standard to us of judging of our Goods, and whenever they dont answer, your best endeavours should be used, to make the Bengal Market more favourable to us, by reducing it to a Correspondency with the Europe Demands[5].[88] The Committee did not pause to reflect what the impact of such a pricing policy would be on supplies. But we shall see later that both in Madras and Calcutta the efforts to reduce prices encountered strong resistance from the Indian merchants, and there was either a shortfall in deliveries or a lowering of the general quality.

Under eighteenth-century conditions the announcement of a policy was not the same thing as its execution. What success the Company's business rules had on the actual economic performance in India can only be discovered through a painstaking and laborious analysis of the account books at the various settlements, which could show us whether the margin of grading by price was narrowing in the 1730s. While there was a 5-10 per cent annual variation in either directions in this decade, the upward trend in cost prices seem to indicate that the servants were not able or willing to hold down prices. An index of aggregate sale price of Indian textiles presented in Table A. 13 shows that there was not much variation in 1730-50. Although the index does not accurately reflect true movements, we can see from it that the unit value was higher than in the seventeenth century, which suggests that the Company was able to pass on some of the price rise and the increase in taxation to the consumers. But in the short-run it was difficult to increase prices, and the repeated comments of the Warehouse Committee on the fall in the mark-up on invoice costs in the 1730s could have been a sign of the rigidity of selling prices. This would explain the concern of the Company at rising unit costs in India, as the increase would have had an immediate impact on existing profit margins.

Table A. 13. ***The estimated sale price of Indian textiles in London***

Year	Price £	Year	Price £
1710	1.91	1735	1.17
1711	1.50	1736	1.38
1712	1.41	1737	1.29
1713	1.61	1738	1.25
1714	1.61	1739	1.27
1715	2.55	1740	1.31
1716	1.99	1741	1.03
1717	1.56	1742	1.36
1718	2.72	1743	1.33
1719	1.30	1744	1.43
1720	1.33	1745	1.19
1721	1.46	1746	1.42
1722	1.35	1747	1.11
1723	1.21	1748	5.17
1724	1.36	1749	2.28
1725	1.20	1750	1.83
1726	1.16	1751	1.95
1727	1.18	1752	1.87
1728	1.74	1753	1.72
1729	1.32	1754	2.04
1730	1.47	1755	1.71
1731	1.36	1756	1.35
1732	1.33	1757	1.96
1733	1.50	1758	1.70
1734	1.14	1759	2.03

Source. India Office Records, East India Company, General Ledgers, L/AG/1 /1/vols. 13-20.
Note. The figures are calculated by deflating the total sales revenue under the heading 'calico and silks' by the total import quantities.

The reason for our interest in the Company's economic guidelines lies not so much in what they were able to achieve as in the fact that they tell us how its controlling mechanism worked. That they achieved some degree of success cannot be questioned. The business system set up in India was modelled on the directives received from London. Beyond a certain point its continuing malfunctioning provoked severe action as the dismissal of the Bengal Council proves in 1732. Another President had his service terminated in 1739, and one of the main reasons given for taking the step was his large borrowings from the Calcutta cloth merchants, which turned him into an agent acting for and subordinate to their interest rather than that of the Company.[89] In textile investments the question of price and quality was a point on which the Company was definitely not prepared to tolerate wide deviations from the standing rules. Apart from this central issue, there were two other

aspects to the Company's textile trade which demanded the attention of the controlling committees at a general level. One was the organisation of the sales and the other the time-link between the order lists and the contracts. There are a whole series of questions on the sale and distribution of the Company's cotton imports which must remain unanswered because of a strange lack of information. The Court often referred to the West African demand and the re-exports to the continent. But who exported them and how much exactly went to the European markets as opposed to the domestic? From the occasional reference in the outward letters and minutes of the Correspondence Committee it is clear that the quarterly sales attracted a large number of foreign buyers, among whom the Dutch and the Germans were predominant.[90] Hamburg was an important entrepôt and the political conditions in Germany and eastern Europe exercised a considerable influence on the Company's sales in London. 'The Troubles and Civil War which broke out in Germany the last year upon the Emperour's demise,' the Court lamented in 1742, 'and which still continue, having put a stop to the large Consumption of Callicoes in those parts, We most sensibly felt the bad effects thereof at our late Sale when they sold at exceeding low Prices.'[91] Many members of the Directorate were concerned with the textile trade and their purchases may have prevented the formation of 'rings', though here again we cannot go beyond speculation. The Court's insistence on taking the auction prices as the true indication of a competitively determined demand is inexplicable unless they were aware of some in-built system preventing coalitions.[92]

The possibility of a conflict between the private interests of the members of the Directorate as buyers of the Company's cotton goods and that of the general shareholders existed. But there was nothing to show that the Court was not other than extremely concerned with the maintenance of a good price record in the sales. Perhaps the strongest evidence for this comes from the incessant demand for comprehensive information from the Court. The Indian factories were asked to send by every ship an exact account of the number of bales remaining in the warehouses, the quantity of every type of textiles contracted for both at the head and subordinate factories, and the expected date of the deliveries. As the autumn sales took place just after the arrival of the first ships from the Indies and were not quite over before the latecomers arrived, such information was vital in guiding the decisions of the Committee as to how much should be reserved for the December and spring auctions.[93] The September sales, which sometimes lasted until late November, were the most important ones for the foreign buyers, and the Company was particularly concerned that there should be no uncertainties either about the quantity of goods expected or the arrival date of the ships. A delay meant a serious loss of sales, as the shippers to

Holland and Germany had to act quickly before the canals and waterways froze up bringing to a halt the most economical means of transport until the thaw began in the spring.[94] The foreign demand was generally governed by the level of stocks in the hands of the wholesale dealers, and in 1722 the Court regretted that the news of the loss of an expected Bengal ship did not arrive before the September sale had started, as it would at once have led to higher prices, recouping a large part of the financial loss.[95] Successful management of the sales, as these examples demonstrate, called for considerable forecasting ability on the part of the Committee of Warehouses and that advance intelligence was an indispensable aid to decision-making.

The problem of co-ordinating the annual lists with the contracts was of lesser magnitude, though in practice the servants in India experienced a certain amount of difficulty in complying with the changes made subsequently to the original list. From the Court's point of view the penalty for careless or negligent execution of the orders was high, and from the mid-seventeenth century the discrepancy between the quantities asked for and those actually supplied was a constant discordant theme in the correspondence between the East India House and the Indian settlements. When the Company demanded an explanation in 1669 for the wide difference between the list and the return cargo, the Surat Factory replied plaintively that it always issued out the orders as soon as the ships arrived from Europe and the broker and his agents at once distributed the advance payments to the weavers in the textile towns. In spite of all the efforts it just happened sometimes that the goods came in too late for the departing ships.[96] Certain misconceptions had also gradually arisen over the years about the exact function of the annual lists. The Councils in India were reminded many times in the eighteenth century that these were not just formal instructions but the outcome of a careful analysis of the Company's sales.[97] An oversupply of one particular type of goods not only affected the price of textiles in that category but tended to depress the market for other kinds as well.[98] The buying officials in India had their own problems created by the practice of sending out overlapping lists which superseded one another. After many years of fruitless exchanges the Court finally laid down a general rule in 1738 which admitted no ambiguity. 'You must always endeavour to conform as near as the circumstances of things will admit to our Lists of Investment by the same ships which carry them out, or the same year the Lists are received.' The reason for this was obvious, 'Trade is of such a fluctuating nature and the Prices and Demand for particular Species of goods are so variable that advantagious Commerce must be governed by Correspondents freshest Advices. We may have sufficient inducements this year to order a large Quantity of any Article and the Markets may be so altered by next year, as to have no manner of en-

couragement to write for a quarter part of the same and so vice versa.[5]" The cancellations of the goods for which orders had already been placed with the merchants could cause no hardship to them, as the Court was sure that not more than half of them were actually ready when the ships arrived, though in case of real hardship the contractors were not to be forced to change the goods.

The purchasing-methods in India

In the textile trade, next to market trends in Europe the institutional arrangements for purchasing perhaps attracted the greatest attention from the Company's managers at home. The essential system of procurement, in spite of regional differences, was the same for all areas of the Company's trade in India. It rested on a contractual arrangement between the merchants and the Company. The former undertook to supply at the port of shipment a specified number of textiles by a certain date and organised their purchase and transport from the weaving towns and districts. The Company in return paid them a certain proportion of the total value of the goods in advance, the rest being paid on delivery. The risk of default by the weavers, who themselves required advance payments, was underwritten by the merchants, but the Company sometimes paid the insurance on road transport when the goods were in transit between a subordinate factory and the head settlement.[100] The system had the great merit in that it drew on the immense commercial experience of the local merchants and thus economised on transaction costs. The textile industry in India, as we have already seen, was a dispersed industry even in areas where it was urban based. Skilful purchasing required regular supervision of the weavers, and these local functions were in the hands of either sub-brokers or a class of traders different from those who contracted directly with the Company. The only foreign ethnic group who could compete with the Indian merchants on equal terms in the matter of cloth trade was said to be the Armenians, who not only knew almost every town and village with a substantial weaving industry but also purchased at prices 30 per cent below those paid by the Company.[101] This is not to say that the Company had no wish to see its servants make direct purchases from the weavers in the interior towns or villages. On the contrary both in Gujarat and Bengal it was strenuously urged on the President that junior servants should be sent to the areas where the investments were procured.[102] In 1722 the Calcutta Council was taken to task for not being more energetic in despatching the Company's own people to the aurangs because the Court knew that 'goods are bought up as the weavers can make them by two or three pieces from one, and five, ten or twenty of another, a few in this little place and a few in that, where the weavers

reside . . . one season would enable them by experience to provide a large [parcel] the next'.[103] The Company was assured by those who had lived in Bengal and had direct experience of trading conditions there that it was a perfectly feasible plan.

However, what appeared as a perfectly simple proposition in distant London was likely to take on a different character in India. Apart from the direct economic benefits received by the Company's servants from the Indian merchants, they were of utmost value as intermediaries between the Europeans and the local government officials. By setting them aside the factories incurred the serious risk of meeting obstructions not only from the agents of the competing merchants, who were prone to harrass those weavers who turned to different customers, but also from administrative officers in fear of losing a lucrative source of revenue in the form of taxes levied on the transit trade.[104] Thus for the greater part of our period the broker and the intermediate merchants remained as an indispensable part of the total investment machinery. Perhaps the most difficult part of the whole operation lay in the system of contracting and pricing. At each principal factory the Company employed a number of Indian merchants whose financial standing and integrity were assured in the local market. The bargaining which preceded the signing of the contract was a lengthy and protracted affair. Each side strived to establish the most favourable position to itself. The contract was a long document containing among other things the names of the merchants, the type of textile contracted for, its dimensions, prices, and quantities.[105] The object of such elaborate documentation was to create the condition for exact comparability between what the merchants agreed to supply and those eventually delivered. One of the peculiarities of the system was that in spite of the free bargaining which took place every year over the level of the contract prices, the actual price paid to merchants seldom corresponded to the latter. This was because of the variations in the quality or dimensions of the goods and the Company's insistence that any negative deviations from the samples must be matched by a corresponding reduction in price. As the merchants brought their goods to the Company's warehouse, the bales were examined by the chief sorter and his assistants. The individual pieces of each type of textile were graded into five classifications, *A* to i?, and it was only the first category that received a price equal to that entered in the contract. A method such as this was greatly open to abuse, and the Company's chronic fear of corruption in the warehousekeeper's office was paralleled by the merchants' frequent complaint that the standard of sorting was arbitrarily strict, involving them in heavy financial losses.

The main difference between Madras and the other two Presidencies in India was the absence of the official broker in the Coromandel settle-

ments. In view of the high risks involved, the Madras Council considered it unsatisfactory that the textile contracts should be concluded with a large number of separate merchants with a diffused system of responsibility. If some effective supervision was to be exercised over these traders, it was necessary to devise a controlling mechanism embodied in the investment method itself. In Bengal the broker provided a reasonable protection against default by individual merchants, and the commercial influence of the great Seth family of Govindapur, many members of which traditionally held the post, virtually reduced the Company's cloth merchants in Calcutta to a closed corporation.[106] But in Madras there was no such safeguard, and the institution of conducting business through brokers which was such a common feature of Surat was unknown in south India.[107] The method chosen by the European trading companies in Coromandel coast for minimising the risk of default was the creation of a joint-stock corporation of merchants with a common pool of funds, each member being assigned a certain number of share units. The system was adopted both by the Dutch and the English, it was mentioned in the Memorie of Laurens Pit, the Dutch governor of the Coromandel factories, in 1663.[108] In Madras the first joint-stock group of merchants was set up in 1680 under the agency of Streynsham Master. The collective responsibility stipulated in the contract this year greatly reduced the risk of bad debts and the joint capital provided finance for the weavers without having to commit the Company's own money beforehand.[109] The reaction of the Court of Committees to the idea of having a joint-stock body of suppliers in India was cautious but favourable. Fort St George was even asked to explore the possibility of creating a bank, with a capital of £100 000 which could be lent out at 6 per cent interest, for providing the goods. By 1684 the Company was recommending the Madras system to the Bengal servants as being much safer and clearer than the individual method of contracting followed in the eastern province.[110] The fact that it was never successfully transplanted to Bengal can be explained by a number of reasons. The English servants themselves thought that the litigious disposition of the Bengal merchants would prevent them from acting together,[111] but the tradition of financial and political independence of merchants was much greater in Bengal than it was on the coast of Coromandel. Not many of them lived under the protection of the European powers and could be directly coerced. In the 1720s Alexander Hume was regretting that the Ostend Company's merchants were people who 'I cant easily distress' because they lived under other nations' political jurisdiction.[112] The wealthy merchants living in Hugli or Kasimbazar habitually refused the Company's demand for financial security as their credit and business status were unimpeachable.[113] Perhaps what finally reconciled the Company to the idea that the formal structure of a joint-

stock organisation was unnecessary in Bengal was the relative ease with which its rapidly expanding investment was secured.

In the early eighteenth century the textile contract in Calcutta was a single document which included the group known as dadni merchants.[114] The total number of merchants annually dealing with the Company varied from twenty to forty. The contract was always a collective one and each merchant received a share of the investment according to his financial standing. While there were many points of resemblance with the Madras system, the main difference between the latter and the Bengal investment method lay in the practice under which the dadni merchants were advanced a sum constituting 50-75 per cent of the total investment. The reason for advancing such a large proportion of the investment remains unexplained, unless it had something to do with the immense volume of the purchase. Hume states in his Memorie as a general rule that the greater the advance the more certain one was of receiving the goods on time, and he went on to explain that the Ostend Company's merchants were not great 'capitalists' who could afford to go to the market with their own funds.[115] But the last observation could not be applied to the merchants of the English Company, who were certain to be men of substance. The most probable explanation is provided by the first reason mentioned by Hume and the assumption that the dadni system was the continuation of a historical tradition which competition among buyers fostered.[116]

The investment method set up by the Calcutta Council in the first decade of the century survived unchanged until the late 1740s when the Maratha invasions and Alivardi Khan's pressing financial needs began to push the economy of Bengal towards the brink of a general collapse. The disruption in textile production, examined elsewhere, gradually affected the Company's system of purchasing in all areas of trade in India.[117] The first crack appeared in Madras. For many years the Indian inhabitants of Black Town, including the joint-stock merchants, were torn by caste dissensions among themselves which came to a head in 1717. The members of the Right Hand Caste performed some ceremonies before the public temple which the Left Hand Caste claimed were an innovation and a violation of the agreed social conventions. The dispute aroused such strong feelings that the Chitty merchants who belonged to the Left Hand Caste left Madras and went to St Thomé. Eventually they returned on the intervention of the Fort St George Council. But the Court of Directors were perturbed when they heard of the disturbances. Their reasons were made clear in the despatch of 1718, 'The Right hand Cast are forty to one in point of number and all Sorts of Handy crafts People among them but then generally they are poor and lavish whereas the left hand Cast are mostly merchants, Wealthy and Parsimonious and forty times richer, in so much

that when We forbad advancing money beforehand for Goods the then Joynt Stock merchants who were of the Right Hand Cast could not contract for an Investment and our Business had stood still had not the Left Hand Cast undertook the Contract which is an evident reason why they should be regarded although in the Country round about the Right Hand are allowed to claim the precedency.'[118] By 1719 the joint-stock merchants had split up into two separate communal groups, and efforts to reunite them failed to restore the old spirit of solidarity.[119] In 1731 the Council admitted that it was a serious error of judgement to try to make the two groups, the Right Hand and the Left Hand Castes, work together as merchants, because they had become 'mortal enemies'.[120] The social divisions were accompanied by a progressive impoverishment of all cloth merchants in Madras. In 1720-1 under the governorship of Francis Hastings the Chitty merchants were subjected to a merciless extortion and actual physical ill-usage which, as the Court of Directors put it, 'hath made the English Government to stink in the nostrils of the neighbouring Countrey'.[121] Five years later President Macrae imposed with the Court's approval savage financial penalties on the joint-stock merchants for supplying unsuitable goods.[122] In 1737 while reviewing the past affairs in Madras another President and Council found reason to regret the severity, 'It is but few Men of Substance who we can boast of having among us . . . The levying those great Penaltys which Sunca Rama and the Chitty's paid in Mr. Macrae's time, if it did not entirely ruin them at least destroyed their Credit, and the reputation of your Business. We have no pleasure in touching upon so sore a place, but it is necessary that your Honours should know so true and great a Cause of our present Malady.' The passage concluded with the sad admission that merchants who a decade earlier were capable of withstanding the shock of any financial accident which might have befallen them in the country could no longer be trusted with the Company's investment.[123]

The 1730s were a bad time for southern India. When George Morton Pitt came to the Chair in 1730, succeeding James Macrae, he was appalled by the death and impoverishment that had taken place in the country after a series of harvest failures and famines.[124] The conditions of the St David [Cuddalore] merchants, always smaller and weaker than those of Madras, had declined to such an extent by 1733 that Pitt considered it unsafe to advance to them more than the bare minimum amount of money which was yet 'too little to circulate among the Weavers and enable them to secure the Produce of the Looms from falling into other hands'.[125] While supplies were disrupted by unavoidable causes, the foreign demand for south Indian textiles had not greatly lessened. This made it difficult to be too severe with the merchants when they defaulted on deliveries or demanded higher prices. The merchants

resident within the Company's bounds were not permitted to supply cloth to any foreign nations, but members of their family living elsewhere could not be prevented from doing so. Before the French Company had begun to invest large sums of money on the cloth trade of Coromandel, the English had had partial command of the market and they could have brought pressure on black merchants, which was now impossible.[126] When Sunca Rama Chitty died in 1736 the Council noted that he and his fellow joint-stock merchants of former times had worn themselves out in the Company's service more from vanity than from hopes of financial gains.[127] As the shadows of intenstine wars lengthened in Carnatic, Richard Benyon, the President, was merely pointing to the obvious when he stated in 1742, 'These reports . .. have a great effect upon the minds of the inhabitants, as they dread nothing more than the march of armies through the country . . . merchants are afraid to bring their goods from the distant countries.' To this he added later, 'So many repeated instances of the merchants being ruined in your service will add much to the aversion of having anything to do with us which is but too general already.'[128] By 1740 the joint-stock merchants had definitely broken up as a group and were acting for the Company as individual commissioned brokers.[129]

The crisis in the Company's established investment methods was undoubtedly more severe in Madras than in the other two Presidencies in India. But similar tensions were to become visible in Bengal in the early 1750s. In western India, as Surat became more and more of a Mughal enclave surrounded by the hostile military power of the Marathas, the stability of the investment paradoxically improved. Part of the reason for this can be attributed to the influx of the weavers to the city from beleaguered Ahmedabad, which made it easier to provide many of the textiles in Surat itself.[130] The Marathas had also allowed a licensing system to develop by which the merchants' goods were exempted from molestation by their armies on payment of a fixed fee.[131] However, the Maratha reputation for avarice and extortion died hard, and when Grose visited Surat in the 1750s he observed that the Hindu merchants of the city preferred rather to live under Mughal rule than under the Marathas.[132] In Bengal their incursions since 1742 and the consequent interruption to trade produced a devastating effect but on a larger and more general level. The Company had abolished the brokership in Calcutta in 1741, though the dadni merchants continued to provide the investment. In 1746, however, the Court of Directors instructed the Calcutta Council to reduce or dispense with the dadni payments altogether because of the disturbed political situation in the province. The goods were to be purchased for 'ready money'.[133] When the proposal was put to the merchants, they refused in a body to agree to it, and submitted detailed arguments for not abolishing the dadni.

The first reason was that it would expose the investment to market forces, as the merchants would buy only those goods in the aurangs that yielded them the highest profits. Secondly, if the nawab's government knew that they were providing goods with their own money they would be fleeced as indeed had happened to the Dutch the previous year when they paid out only a small amount of dadni.[134] That the merchants were speaking the truth is confirmed by Jan Kersseboom, the Dutch Chief, who wrote in his Memorie, 'In the year 1747 there happened something accompanied with such violence and excesses that I do not wish a description of it to be included in the papers of this Directorate.' Nevertheless he went on to describe the murderous events which led to the abduction of the V.O.C.'s chief merchant Hari Krishna Ray by the nawab's desperados.[135] In fact his lengthy report provides the most graphic account of the ruin of the Bengal textile merchants.

From 1744 onwards the Dutch Directeur in Bengal had reason to suspect that all was not well with his merchants. But things were allowed to continue for fear of impairing their credit. In 1746 one of the servants of the Raja of Nadia warned the Company that four of the leading merchants of Santipur, which was in the Raja's principality and a great textile centre, were ruined men. So serious was the position that the Dutch Chief feared for the Company's solvency in Bengal, and all investment arrangements abruptly ceased, as the merchants could no longer be trusted with advances and no moneylender or banker of Santipur would stand surety for them. With this situation confronting them the Dutch were forced to employ gomastas who would go to the villages and buy the pieces directly from the weavers, though considerable difficulty was experienced in obtaining a sufficient number of able gomastas and in maintaining the uniformity of standards.[136] It is startling to discover that the events leading to the replacement of the English Company's dadni merchants by gomastas should have followed a course so parallel to that of the Dutch. In 1753 Charles Manningham and William Frankland, the two export warehousekeepers in Calcutta, drew up a report for the Council in which they observed, 'The original intent and design of conducting the investment by means of Dadney Merchants were doubtless founded on good and sufficient reasons, some of which we presume were the hopes of lessening the Company's risque at the Aurangs by advancing money to such merchants as were well able to give good security for delivery of the goods contracted for . , . How far these expectations have been answered of late will not require much time or pains to Illustrate.'[137] The report pointed out that in 1752 the total amount of the investment contracted for was just over Rs 1.5 million, of which 85 per cent was fully advanced to the merchants. But by the time the ships were ready to sail goods worth only Rs 800000 had been brought in. In the past the total Calcutta investment easily

amounted to upwards of Rs 2.5 million and little difficulty was met in supplying it. But now no dadni merchants in the present circumstances could be relied upon to guarantee delivery.[138] The report was presented just after Ram Krishna Seth, speaking on behalf of other Seth merchants, had refused to contract on the Company's terms, and it provided a foundation for the Council's decision to dispense with their service and employ gomastas directly for purchasing the textiles in the aurangs.[139] If it was not for Kersseboom's corroborating evidence one would have suspected that Frankland and Manningham were exaggerating the risks of the dadni system and the unreliability of the merchants. After all there were still left in Bengal merchants like Omichund and Khwaja Wazid whose financial solvency could not be questioned. It is possible that by displacing the dadni merchants the Calcutta Council hoped to further some private interest of their own. They could hardly have justified this step, however, unless the textile trade of Bengal and the merchants previously connected with it were already approaching the end of the road. That end came in 1753 and the fate of the dadni contracts was finally sealed with the fall and recapture of Calcutta a few years later.[140]

13
PEPPER

The political considerations of the pepper trade

By the middle of the seventeenth century the supremacy of pepper in Europe's trade with Asia was no longer unchallengeable; but this became evident only in retrospect. Pepper was still the most important single commodity imported by the Dutch East India Company. During the triennial period 1648-50, the invoice value of pepper in the V.O.C.'s total trade with Holland was 50.34 per cent and at the Amsterdam sales in the same years it yielded 32.89 per cent of the total sales revenue.[1] For the English Company comparable figures are not available until 1664 when pepper accounted for 13.2 per cent of the returning cargoes from the Indies. In the 1670s its proportion in the Company's Asian trade were not far short of the Dutch figures, though in absolute terms English imports were generally of lesser magnitude.[2] The greater share of the pepper trade which the English East India Company's powerful competitors in the Netherlands managed to reserve for themselves explains at once the profound fears entertained by the Court of Committees towards Dutch intentions and the enormous commercial appeal of pepper on the minds of contemporary merchants. By the third quarter of the seventeenth century it must have become clear to all those who were concerned with the East India trade that there were other and more valuable Asian commodities which could be brought to a profitable market in Europe. But few of them would have been prepared to concede that the national stake in the European pepper trade should be relinquished in favour of rival foreign countries. The reason for this is to be found in both the historical role played by pepper in Europe's long-distance maritime trade and the technical considerations peculiar to the trade itself. Without the use of pepper as ballast cargo, it was difficult to stabilise the ships during their arduous homeward voyage. Even as late as 1754 the Court of Directors thought fit to remind the Bombay Council that, although the Company actually lost money by importing pepper from the Malabar coast, yet it must rely on the Council's best judgement to purchase the necessary quantities on the cheapest terms possible, as the shipping from western India could not be got home without pepper.[3]

Apart from these purely economic and technical constraints, the importance of pepper in the earlier period derived to a considerable extent from the memory of its political associations. Pepper was the main commodity on which the Portuguese had founded their imperial ambitions. For more than a century, since 1506 when Dom Manuel, the king of Portugal, turned the spice trade of Lisbon into a Crown monopoly, the Portuguese sought to preserve their exclusive trade and empire in Asia through the undisguised exercise of sea-power.[4] It is of course well known that their efforts to turn the flow of pepper and finer spices through the Red Sea and the Mediterranean were ineffectual in the long run. This development, however, did not come about as a result of any lack of political ideology on the part of the *Estado da India*.[5] The Portuguese failure to cut off the Mediterranean spice trade either at its source or in transit through the Red Sea turned them, as Braudel has pointed out, into customs officials.[6] During the second half of the sixteenth century, in organising its pepper trade the Portuguese Grown had the choice of eliminating its competitors by undercutting their prices in Europe or alternatively of restricting its own supplies at the level where Portuguese prices matched those of the Levant traders, being determined by the latter's transport costs and payments for protection en route. One of the most original explanations of the survival of the caravan routes in this period is the recent suggestion that in following the last alternative the Portuguese indirectly ensured that the pattern of redistributive trade should not undergo any fundamental change: the Crown profits were fixed by protection costs on the caravan routes and not by the actual prices paid for the pepper by the Portuguese on the Malabar coast.[7] In the seventeenth century the true heirs to the Portuguese claims of a monopoly in spice trade were the United East India Company of the Netherlands. There is no doubt that from the early years of its trade the V.O.C. was determined to establish and defend with real strength an exclusive trade in finer spices and perhaps also in pepper.[8] But in the English East India Company it had an inconvenient and troublesome competitor, whose own claims to a share of the spice trade threatened to lead to a price war and declining profits. This actually happened in the case of pepper during the first forty years of the seventeenth century.[9] Dutch success in excluding the English by armed force from the Spice Islands combined with their ruthless offensive against the Portuguese in the eastern seas not only prevented the finer spices such as cloves, nutmeg, and mace from sharing the same fate but it also left little doubt in the minds of the English Company's managerial committee of the ultimate destiny of Dutch policy in the East Indies.

Between 1660 and 1685, when the Sumatran settlement of Bencoolen was founded, the political considerations of the pepper trade turned on

the question whether the Dutch Company intended to debar its rivals from access to Bantam and the pepper ports of Malabar. This was an issue whose outcome still hung very much in the balance. Bantam had been blockaded by the Dutch during 1652-9 and the avowed purpose of the stoppage was to reduce the English demand for pepper at the port.[10] Even after trade had reopened, the Company's servants continued to feel that the Dutch were doing every thing in their power to destroy 'our trade'.[11] Even the Court of Committees feared that the Dutch might go so far as to block up Swally, the entrance to the Surat river, on the pattern of Bantam.[12] However, it was really the conquest of Cochin in 1663 which provided the first ominous signs that the long-awaited Dutch onslaught for the mastery of the pepper trade had at last begun in real earnest. Henry Gary was in Goa when the news of the fall of Cochin arrived together with the blockading Dutch naval squadron. 'This late losse of Cochine,' he records, 'and the calamities which so much threatneth to fall uppon them suddenly . . . hath brought so much confusion and distraction uppon these people as that the principalest fidalgos and the whole Councill of this State hath severall times made them of late presse the Viceroy to make an offerr of Bombaim unto Sir Abraham Shipman.'[13] The letters written by the Malabar factors following the capture of Cochin indicate that the Dutch policy on the coast would run on the line of the classic coercive method adopted in Indonesia, whereby a subjugated local ruler bound himself by a formal treaty not to 'suffer any buyers or sellers in any part of his country' except the agents of the V.O.C.[14] The Surat Factory itself warned the Company in January 1664 that the price of pepper in town had doubled during the previous year and might rise even further in a few more years, because the Dutch intended to make pepper their own commodity as absolutely as they had done with the spices of nutmeg and mace.[15]

The effect of the dramatic news from Malabar on the Court of Committees was that it made formal representations to the Dutch Company through the king's envoy at The Hague, Sir George Downing, who addressed his protests to the States General. In reply the V.O.C. acknowledged that contracts had been made between the raja of Porcat and the king of Cochin, which promised to show the Dutch Company the same fidelity and loyalty as were shown to the Portuguese. It was also true that according to another treaty the Cochin ruler engaged to deliver all the pepper and wild cinnamon grown in his country and at Porcat and Cranganore to the Dutch alone, and that it should be shipped at Cochin in their vessels only, all other nations being excluded. These instruments completely legalised the Company's position. If the English found that the natives of Porcat did not dare to sell them any pepper because of the contract, they should direct their complaints to the raja and not to the Dutch.[16] Such an uncompromising statement of

policy was to leave the English East India Company and the royal envoy in Holland less than satisfied, and the question of obtaining an agreement with the V.O.C. on unhindered supplies of pepper continued to feature in England's diplomatic relations with the United Republic.[17] However, the struggle over the pepper trade was destined to remain confined to the two dominant European East India Companies with their respective governments providing only moral and occasionally diplomatic support. Besides, after the initial excitement over the capture of Cochin had passed, the V.O.C. found itself unable to prevent the export of pepper from either Malabar or Kanara. Several reasons have been suggested for this failure. A complete naval patrol of the whole coast from Goa to Cape Comorin was likely to be very expensive and the coast was divided into so many independent political principalities that a considerable force would have been required to extract compliance from each individual local ruler to the Dutch commercial will.[18]

If the Dutch failure to create a monopoly in European pepper supplies was visible to everybody during the eighteenth century, the English Company was far from certain in the 1680s what would be the eventual outcome of the struggle. In 1677 at the peak of the Company's trade with Bantam, the Correspondence Committee drew up a memorandum, the purpose of which was to present to Sultan Abull Fettahee of Bantam the current political balance of the pepper trade. The king was to be reminded that the Dutch generally purchased vast quantities of pepper at prices lower than what the English paid at his port and it lay within their power to make the trade totally unprofitable for other nations in Europe. If that happened they would of course become the 'sole masters of it and when they become the only buyers in India, they would soon both force the Indian people to lett them have their pepper at such prices as they please and allsoe make the European Nations pay what rate they should sett on it as they doe in those other Spices.'[19] What was feared in 1677 became a reality with the Dutch occupation of Bantam in 1682 and the expulsion of the Company from the port, but there was no lack of resolution that the Dutch efforts were to be resisted if necessary with force.[20] In the instructions sent out to Malabar, Surat, and Fort St George, the Company expressed a determination not to let its competitor quietly enjoy the fruits of its triumph, and the officials in India were asked to secure the sources of pepper still open to the Company.[21] It was clearly recognised that pepper was the main cause for 'the great Firmentation between the Dutch and us', and in 1687 *the* consequences of a Dutch victory were underlined with a force rarely seen in the Court's general letters.[22] 'If the present misunderstandings,' Child and his fellow Directors wrote to the Bombay Council, 'between the two Nations should ferment to an open war, it would be thought by the Vulgar but a war for Pepper which they think to be a slight thing,

because each family spends but a little of it. But at the Bottom it will prove a warr for the Dominion of the Brittish as well as the Indian seas. Because if ever they come to be sole Masters of that Commodity, as they are already of nutmegs, mace, cloves, and cinamon, the sole Profit of that one Commodity, Pepper being of generall use, will be more to them than all the rest and in probability sufficient to defray ye constant charge of a great Navy in Europe.'[23]

Here then was the heart of the matter, the real truth about the contest. Pepper was seen as an article of general, if not mass, consumption, and whoever commanded its trade was in a position to levy a tax on the consumers in the form of monopoly profits. From that revenue the cost of building and maintaining additional ships could be financed. No one in the seventeenth century, least of all merchants trading to the Mediterranean, the New World, or the East Indies, needed a lesson on the relationship between trade and sea-power. The V.O.C. might regard its English rival as weak and lacking in resolute policies at this time, but the latter's ships were still fighting ships, and even the Dutch could see that they would need to be driven off the sea before the pepper monopoly could become a practical reality. However, with the removal of the English to Sumatra, some of the heat went out of the immediate conflict with the Dutch. While Bantam remained as an entrepôt to European purchasers of pepper, its close proximity to Batavia was a continuous source of irritation to the Dutch. Besides, by forcing the East India Company to remove to distant Sumatra, the V.O.C. had achieved a limited objective. The pepper exports from Bencoolen in the eighteenth century were seldom as large as those the Court of Directors would liked to have received from that settlement, and they were nowhere near the quantities previously exported from Bantam.[24]

The volume of imports and market conditions

The central position of pepper in the Company's finances in the early years of the seventeenth century had given rise to long and detailed discussions on sales and marketing policy, which tell us a great deal about the nature and organisation of the pepper trade in Europe. During later years the comparable evidence is much less informative. For one thing the Company discontinued the old practice of either declaring dividends in pepper or selling it in bulk to large and wealthy syndicates for ready money.[25] The marketing of pepper now followed the standard method of candle auctions at the four quarterly sales. It was divided into lots and put up for sale at definite set prices.[26] Free bidding among buyers then determined the final price at which the pepper was to be sold. This method had the great advantage of removing a potential conflict of interest among the general shareholders and the specialist merchants

who took out their dividends in pepper. Combinations or rings among buyers could of course still depress prices and therefore the total revenue available for distribution as profits. But the pricing policy at least was not likely to be a point of dispute among the members of the Court of Committees. The acceptance of auction prices, derived on the basis of the bidders' complete knowledge of each other's bids as demand or market indicators, points to an institutional practice which is of some interest. In so far as pepper was concerned, because of its homogeneous nature, the East India Company was in the position of an oligopolist. However, the price of pepper was not a decision variable, except in the limited sense that in setting a price at which bids were to be invited the import Warehouse Committee took into consideration the general state of the market. The Company preferred to take the price as given and adjust the quantities offered for sale, which the policy-makers knew would react on prices at a subsequent period. In some ways this practice had the merit of removing some of the uncertainties associated with the oligopolist pricing methods, and its operation can be seen not only in regulating the overall volume of supplies from the Indies over a longer time-span but also in the immediate decision on the quantities to be put up for sale and the length of time for which the Company would guarantee to the prospective buyers that no further sale of pepper would be made.

Although the Company abandoned the system of selling pepper at fixed or negotiated prices in the second half of the seventeenth century, it still attempted to retain a certain measure of control over costs. The easiest course open was to set a price ceiling beyond which all purchases were to be halted. Such a restriction understandably caused considerable irritation to the Company's servants in Asia, struggling to overcome local and Dutch competition.[27] But the determination of the quantities to be imported through the operation of definite cut-off points in cost prices was a most effective way of ensuring that a minimum level of profitability was maintained. Nor was the Company a passive price-taker in the home market. When it was learnt in 1668 that considerable quantities of pepper had been offered for sale and were to be brought over from Holland under a special licence obtained from the king, it was decided that certain members of the Court should meet the Secretaries of State and impress upon them the great inconveniences that might arise not only to the Company but also to the whole kingdom.[28] In order to preserve its home sales and keep up the prices, the Company had placed great emphasis on the export market in the earlier years of its trade in pepper. That the export trade was still considered to be important we learn from the safeguards taken to see that the pepper taken out for 'transportation' was not resold in the home market.[29] The Company's attitude towards the domestic and overseas markets re-

flected a basic difference in its position in the two areas. In the home market the Company was a straight monopolist, and the presence of bidders intending to resell in a protected market helped to support prices at the auction sales, which were in the main likely to be influenced by the level of pepper prices prevailing in Holland and in the consuming areas of Europe. But with regard to the export markets the Company had to take into account the sales and import policy of its large rivals on the Continent.

In any commodity market the instability of prices arises from the fundamental problem of an excess supply or excess demand. Transport charges are important as constraints, but production costs play a lesser part in the determination of selling prices than in the case of manufactured goods. Short-term variations in commodity prices can be reduced by holding adequate stocks, although the speculative demand arising from future dealings tends also to affect the general movements in prices. There is evidence that the Company, after its early experience, had become sensitive to the necessity for maintaining sufficient stocks of pepper to supply its quarterly sales.[30] The predictability of the market always had a high preference in the Company's decision-making, and the policy on pepper sales was no exception to this general rule. However, as the Company had shifted the pricing decision onto the wholesale dealers, the principal task of the Correspondence Committee in reducing uncertainties lay in obtaining as much information as possible on the supplies to be expected from the Indies and in keeping the Asian factories closely informed of the economics of the pepper trade in Europe. These exchanges were particularly detailed and illuminating in the 1670s when the Company's total trade was rapidly expanding. In terms of volume, the history of its pepper imports can be divided into three clearly discernible periods. Without question, the years from 1669 to *682 saw the high tide of imports. In 1677 alone the total quantities were over 8 million lb, a figure that was not surpassed again during the rest of our period of study. With the loss of Bantam, the supplies fell sharply and there were considerable year-to-year fluctuations, originating mostly on the supply side. The difficult period of trade lasted for more than two decades. From 1713 to 1760 there was a general stability, though the total imports went up or down according to demand in Europe. Except for one or two years, there were no prolonged periods of crisis.

In the 1660s the quantities reaching London were not large compared to the volume of imports during the next decade, but they were similar to the figures reached in the first half of the century. The supplies were also interrupted by the outbreak of wars with Holland, and in 1666 considerable losses were sustained as a result of large stocks being burnt in the Great Fire of London.[31] As early as 1663 the Court expressed a

desire to drive a full trade and instructed the Bantam Factory to provide full information on the total quantities of pepper that could be annually purchased at Bantam, Jambi, Macassar, Japara, Banjar, and other places in South East Asia. The Company was prepared to import up to 2000 tons a year and it promised to supply the factory with the necessary amount of stock and shipping.[32] In a letter to Bantam written in October 1670, the Court of Committees very clearly outlined its own reasoning for keeping the trade at a high volume. The Bantam Council had written to the Company that for lack of space in the warehouse, it had had to refuse a large quantity of pepper which the Javanese traders subsequently took to Batavia. Such news was most unwelcome to the Court; for the only reason for keeping a permanent factory at Bantam was the facility it provided in purchasing pepper cheaply and easily. There was also a close relationship between the volume of purchases, the overhead costs, and total profits. Since prices in Europe had fallen from the previous high level, 'if we doe not bring great quantities therof', the Company wrote, 'it will not mainteyne ye charges of our Factories and answere out trouble and adventure.[5] The Bantam Council were urged to send as much pepper as possible and at the cheapest price, so that in Europe the Company could in some reasonable measure 'keepe markett with the Dutch'.[33] The reasoning that was being suggested here was that by increasing the volume of pepper imported, total absolute revenue from its sale would also increase and this would help to reduce overhead costs. The implied question left unanswered for the moment was the impact of these large imports on demand. In 1670 the Company received 4.3 million lb of pepper. It was down to 2.9 million lb next year, but went up to 7.6 million in 1672. To judge from the steep decline in prices, which affected both the English and Dutch sales in this decade, it would seem that the combined imports of the two Companies were considerably in excess of current demand in Europe. In 1668 the price per lb had been i6.8d. Two years later it was only g.6d and by 1675 the price had fallen to 7.2d. Towards the end of the decade the Dutch Company was offering pepper for public sale without fixing a minimum price.[34]

It was not long before the Court of Committees fully realised that the quantities of pepper brought back by various European nations would make it a very cheap commodity.[35] Although the ratio of cost to sale price of pepper was higher than in the case of high-value goods such as Indian textiles, freight costs were also proportionately higher for bulk goods, yielding a very small margin of profits. The natures of the markets for pepper and textiles were again very different. The latter was expanding at an accelerating rate, while the final aggregate consumer demand for pepper was probably relatively inelastic. To state this is not to deny either that the Company's own price elasticity of demand could

be high in Asia or that for the individual wholesale buyers the partial elasticity was likely to be higher than in the case of general consumers. For the Company the declining profitability of pepper created something of a dilemma. Because of Dutch competition, the Court was reluctant to reduce the total quantities imported, for fear of a loss of market share. At the same time, the continuing trend towards smaller revenue and even a net loss was not a phenomenon that the Company was prepared to view with equanimity. In the letter to the sultan of Bantam, to which reference has already been made, this particular problem was voiced with great force. The ruler was reminded that the Company yearly lost money by this commodity and what was worse even at the current loss-making price it could not hope to sell more than a third of the stocks on hand and expected by the next shipping. As if conscious that an obvious exaggeration had been made, the Court went on, 'That we have encreased our trade instead of lessening it may at first seeme a paradox to the Sultan that we should soe doe and yet at the same time complain that we are loosers thereby. It being most certaine that the end and designe of Merchants in trade is Profit. But when it shall be considered that the way to render our Antagonists hopeless is their designes and so to surcease their attempts is for us rather to seeme resolute . . . and . . . bear a present loss in prospect of future constant profit.'[36] As a comment on risk-taking and its rewards there could have been few contemporaneous examples as explicit as this letter of the Company.

If the Company had little room to manoeuvre in Europe, the general drift of its argument was also quite clear. The initiative lay with the king of Bantam in reducing the cost price of pepper. The profitability of the trade at the European end, in the view of the Company, could be restored only with the aid of a reduction in variable unit cost of pepper. The question manifested itself in a particularly acute form in the case of supplies received from Malabar. Until the fall of Bantam, compared with the Indonesian variety, pepper from western India occupied a much smaller proportion in the Company's total imports. More expensive than the latter, the Malabar or Deccan pepper also sold at a better price. But in the 1670s the differential was being rapidly eroded. The factory at Surat was informed in 1670 to encourage the Malabar settlements by sending home as much pepper as could be procured, but it was asked not to buy it from intermediaries who had purchased in the interior markets in the first place. At 6d per lb Malabar pepper cost twice as much as Javanese or Sumatran, and after freight charges and customs payments in England had been added to the unit cost, there was very little profit left.[37] These were points to which the Correspondence Committee were to return again and again during the next few years.[38]

By 1675 the sluggishness of demand in Europe was reinforced by another obstacle. In Poland, Turkey, and Italy ginger was being used increasingly as a substitute for pepper. It was to be expected that the price of pepper would not depend on the volume of its own supplies alone and that the price of complementary products should also influence it. Ginger was being brought over from plantations in the West Indies and America and sold at 2d per lb.[39] In its letter of 1676 to Surat, the Court pointed out that because of the competition from ginger and the disruption of markets as a result of wars in Germany and Eastern Europe, the price of pepper had declined to such an extent that, at the next general sale, Jambi pepper was to be put up at 8d per lb and pepper from Baliapatam at 7.3d.[40] It can be seen from an inspection of the sales figures in Table C.14, p. 529, that in the 1670s the years of high sales alternated with years of low sales. It is difficult to say whether such a sequence followed from a deliberate policy to restrict the quantities offered for sale until a stipulated period had expired or whether it was the result of market forces alone. On the supply side, the Company was certainly anxious to avoid the leads and lags imposed by long-distance trade. The careless detention of ships in port beyond the safe sailing dates could lead to the loss of a whole trading season and give rise to 'the great inconvenience of not having a constant supply for the market, and afterwards to have a greater quantity than will vend'.[41] Frequent expostulations of this kind addressed to the servants at the Asian end reveal that the Company was acutely aware of the role of expectation in price-formation. For the buyers of the Company's goods had to take into account not only the actual stocks held by the English and Dutch East India Companies but also the quantities expected in the immediate future. The news of a shipwreck or an interruption to supplies resulting from some other causes invariably produced high prices - in some cases these were so large as to compensate for a substantial proportion of the down-turn in quantities.[42] But violent movements in prices which were the induced effect of unforeseen crisis in the Company's own trade were not something that the Court of Directors wished to encourage as a matter of policy.

Nevertheless, there were occasions when such fluctuations did occur and the rapidity with which the market could go from one extreme to the other was quite remarkable. In this respect the conditions of the 1680s, lasting beyond the turn of the century, form a striking contrast to those of the earlier decade. The voluntary restriction in quantities combined with the English expulsion from Bantam was working towards a drastic fall in the level of pepper supplies. In 1681 the Company had received 5.1 million lb; next year it was only 2.3 million lb and in 1683 imports were down to 1.3 million lb. The contraction in supplies produced its inevitable effect on the selling prices, and when the news of

the capture of Bantam arrived in London the price of pepper at once rose by 2d per lb.[43] Even before this event the Company was beginning to revise its policy. In South East Asia and the Far East, the Company had decided that its ships trading between China, Tongking, and Madras should make a second return voyage to China before departing for Europe, and pepper was an essential cargo in the Asian inter-port voyages. The other reason ‘why we would have you stored with pepper’ was because ‘if the Dutch can carry off their Conquest of Bantam, they will doubtless raise the price of pepper in Europe, and it will be cheaper for us to keep a store in India (before Freight and Custome is added to its Cost) than to keep it here against a Rise, especially considering that 12 months after landing it cannot be exported from hence to any forreign Market without ye loss of M. per lb impost which is 15 or 16 per cent upon the first cost.’[44]

Clearly, the cost of holding inventory and the time limit on the customs rebate were important considerations in the economic decision-making of the Company. For a central trading body in an oligopolist position it was also vital that its potential customers should receive the least amount of information on the level of stocks. By keeping its pepper in India the Company hoped to achieve a double purpose. It would minimise the financial risks in case the rise in the price of pepper failed to match expectations and at the same time conceal from its wholesale dealers and the competitors in trade the real state of affairs. Although none of these considerations was explicitly mentioned, the deliberations of the Dutch Company in the late 1680s confirm that a similar kind of reasoning was being applied to the pepper trade in general. For a number of years the stocks held by the V.O.C. in Europe had been run down through the restriction in supplies, and in 1687 they were considered to be at a minimum level. With the rise in prices the *bewindhebbers* [the Directors of the V.O.C] had the choice of either increasing the imports or bringing home only a moderate quantity of pepper accumulating in Indonesia in the hope of forcing up the prices still further. It is interesting that the first course was adopted and the reason given was that the higher prices might start off another round of competitive buying among European nations with the English leading the way.[45] The letters written by the Court of Committees during this period show that the Dutch Company had correctly guessed the strategy of its competitor, for by 1687 the price of pepper in London had risen to the point at which the Court considered pepper a most profitable and necessary commodity.[46] Two years later the demand was so great in England that the Company informed Bombay of its intention to increase the stocks immediately. When account was taken of the small imports during the previous three years, it was understandable why the Company should have looked upon pepper as the most urgently required bulk cargo.[47]

But the really large increases in prices were yet to come. In 1691 the Dutch Company lost a substantial amount of pepper through shipwreck, and though the English Company had received 3.5 million lb in 1690, the imports were down to only 461318 lb two years later. The small quantities reaching London had an immediate impact on prices, which rose to i6.8d per lb in this year.

The scarcity which affected the whole range of East India goods in Europe, including pepper, in the last decade of the seventeenth century appears to have originated out of three separate factors: the previous policy of reducing supplies, the Company's Mughal war during 1688-9, and the outbreak of wars in Europe itself. By 1696 the retail price of pepper had risen to 2s 6d and the Company was urging even Madras, which had an uneconomic location for pepper purchases, to send home whatever quantities the Council could procure, if necessary by encouraging the caravan traders to bring it overland from the Malabar coast.[48] Although the price of pepper continued to remain above I4d per lb in the Company's sales until 1706 (the last year for which we have separate information in the account books), the Court considered this a minimum threshold if the high wartime freight rates and the new customs duties were to be covered.[49] The unsettled market conditions were reflected in fairly rapid movements in prices. The sudden rise of 1696 was obviously the result of inflationary conditions in England, caused by the deterioration of the currency. But when the sea-routes reopened to free traffic after the signing of the Treaty of Rijswijk (1697), the Company expected the price to decline and asked the Surat Factory to return only the charter-party tonnage in pepper.[50] The expected fall had in fact occurred by the spring of 1700, when the Bombay Council was told 'pepper is fallen very considerably in Holland and at our Candle here, the Malabar sold but at fourteen pence a pound, we have no reason to expect it will advance'.[51] The rise in the rate of taxation and transport costs was responsible for reviving the old quest for the cheapest source of pepper and the exhortations to the servants for reducing its prime cost.[52]

During the eighteenth century, the Company's pepper trade continued to be dominated by the economic rationale established earlier. The overhead costs, as always, were the leading theme in the Correspondence between the Court and the Asian settlements on the subject of pepper. In 1711, for example, Bencoolen is told 'demorage is an heavy charge at all times but more especially in time of war ... because pepper is a commodity which yields but a small profit at best and therefore cannot bear any diminution'.[53] In an abstract of costs prepared later it was found that the pepper exports from Bencoolen would have to be trebled from the average of the previous years if the administrative charges were to bear an acceptable ratio to the total costs.[54] The annual import

figures show that in the eighteenth century Sumatra had fallen behind Malabar in the supply of pepper. Between 1700 and 1740 there were only five years when the Sumatran exports approached or exceeded 1 million lb. But in the last two decades of our period the position of the Bencoolen plantations had greatly improved, and the Indonesian pepper was fetching a better price in London than the Malabar variety.[55]

While the prime cost of pepper was much less important in the case of supplies from Indonesia, it was a perennial problem in regard to western India. In the eighteenth century the high price of Malabar pepper, which always contrasted unfavourably with the low-cost Sumatran pepper, was reinforced by another new element, the cost of maintaining and defending the Malabar settlements.[56] The general decline in the commercial importance of western India in the overall framework of the Company's trade made these charges appear particularly stark. There was also the additional suspicion that the Malabar factories benefited the private trade of the Company's servants more than its own pepper trade. The Company knew that for a number of years large private dealings in pepper were common practice among its servants. There were even fraudulent attempts to charge the Company a higher price by buying it during the cheap season and then entering in the books the later price which had been raised by the demand from private traders arriving late on the coast.[57] In fact, the Court of Directors felt so strongly about the expenses incurred at Tellicherry under the management of Robert Adams that they were prepared to abandon the settlement altogether unless the charges were drastically reduced. The reason for the Court's severity and increased interest in the reduction of costs was that the pepper trade in Europe was undergoing one of its periodic downswings, and the Company was no longer prepared to pay high prices in order to secure the supplies.[58] In holding its servants responsible entirely for the rise in the price of pepper on the coast of Malabar, the Company was perhaps being less than fair to them. For competition among buyers had intensified on the coast during this period, which in a large measure contributed to the rising trend in prices.[59]

At the same time, there was considerable force in the argument that the cost of pepper, or any other article imported by the Company, should be viewed not solely in the light of supply conditions prevailing in Asia, as the local factories were apt to think, but the trading situation in Europe should also be taken into account. The periodicity in the selling price of pepper was as much present in the eighteenth century as it was in the earlier period, and its weight in the Company's decision-making tended to grow with the declining influence of the Dutch Company to control the supply of pepper. The selling price of pepper in the

quarterly auctions was still the main mechanism controlling the quantities ordered by the Company. In 1713–14 the price was high in England, even showing some tendency to rise. This caused the Court to take off all previous restrictions on the volume and both the Sumatran and Malabar settlements were asked to send home all that they could obtain.[60] One of the points encouraging the increase in imports was the fact that the recent parliamentary duty of i8d per lb of pepper consumed in the country was to be paid by the buyers and not by the Company.[61] The actual volume of pepper received, however, lagged far behind the orders, and it was not till 1719-20 that the quantities exceeded 3 million lb. But by this time the price had begun to decline once again, and during the trade depression of 1721 it was bitterly complained that pepper was fetching only 6-7d at the Company's sales.[62]

The price limits imposed during this period kept the total quantities down in the 1720s, and it is only in 1735 that we once more hear of high pepper prices in Europe. The improved profitability is reflected in the statement made in 1738 that 'you may perceive by the various schemes we are upon for the enlarging of our Trade how necessary it is for our Interests and how acceptable a service you will do us in securing a large Magazine of pepper on your coast, as it may be made a premier resort to relieve us in all events.[563] Pepper was not a perishable commodity and required 'no great stock in the first purchase'. In times of high prices the Company could draw most advantageously on the reserve accumulated in India, but the prices apparently did not hold out for too long. For in 1754 the Company calculated that during the ten years from 1742 to 1751 it had lost £90000 on the pepper shipped from Tellicherry. Similar computations carried out for Bencoolen revealed that the losses on Sumatran pepper amounted to £32000 during the same period.[64] These were large figures, and as pointed out earlier, the Company justified the continued importation of pepper on the technical ground of ballasting the ships. But the historian is compelled to ask whether the Company's profit-making urges were not being blunted by its increasing involvement in the territorial politics of India and the naval confrontations with the French. On the surface the same attention was shown to the whole question of profitability. In Bencoolen special commissioners were appointed to reform the administration and revive the declining condition of the pepper plantations.[65] The high cost price of Malabar pepper, particularly the price allegedly paid by the French Company, was received with incomprehension. Why did not the French, the Court asked in 1754, pay the same and the lower price as the English ? They must surely tire soon of paying such loss-making prices.[66] It is evident from contemporaneous letters that the Court of Directors' concern for the commercial viability of the Company's trade had not diminished. However, the indisputable fact remains that for

ten years the Court had allowed the pepper imports to make a continuing loss. A possible explanation may be found in the problem of the time horizon with which a large income-generating economic organisation tends to work. Since pepper was not a large item in the Company's total revenue, a temporary loss would be equated against the permanent components of income which may be derived from a time-span as long as ten years. It would also be equated against the high risk of lading a ship with fine goods alone.[67] Finally, the low elasticity of total demand for pepper indicated that the price was likely to improve rapidly when quantities were kept limited.

The international competition for pepper in the seventeenth and eighteenth centuries made it imperative for the successful trader to discover the most secure and the least expensive source of the commodity. There was no doubt in the early 1660s that the bulk of the Company's pepper must come from the Indonesian archipelago, where factories had been settled since the inception of its trade. The stability of supplies that was visible at Bantam in these years was to some extent lacking on the western coast of India in so far as the pepper trade was concerned. Dissimilar as the supply conditions were in South East Asia and western India, the Company's pepper trade in both the areas had at least one point in common during the seventeenth century. The method of purchase was a strictly commercial one. Later when Bencoolen and its satellite settlements became the chief suppliers of English pepper from Sumatra, the position changed. In the earlier period, unlike the Dutch who relied on bilateral agreements, usually of a political nature, to secure their pepper, the English Company bought it in the open market in competition with other buyers. In adopting this practice, the Company was deliberately following a chosen line of policy.[68] Even in the third decade of the eighteenth century, the principle of non-intervention in Asian politics and the preference for commercial methods received a striking reaffirmation when the Court of Directors wrote to Bombay, 'If the King of Cotata . . . and the other Mallabar Chiefs do not for their own sakes put a stop to the Canaree Conquests, we can never pretend to maintain a sufficient force to withstand them, nor does it much concern us who reigns and governs those Territories . . . Whatever impositions are laid upon the inhabitants, their armies cannot be paid nor the people subsist unless free vent is allowed to the product of the country, and therefore self-interest will oblige them to be very glad at all times to part with their Pepper for ready Money at the Market Price. Hard Dollars and good Silver Rupees will force a trade in most parts of India, but this is a Maxim that our servants there do not seem to be duly sensible of.'[69]

As the pepper trade had strong spot market characteristics, cash transactions offered many advantages in securing regular supplies. The

competitive nature of the market can be seen from the way the prices were determined. Even the Dutch were prepared to offer in 1665 good prices to the Sumatran or Bantam traders as part of their policy to attract most of the Indonesian pepper to Batavia.[70] In general, the Bantam price was strongly influenced by the market in Batavia and not by the supply price prevailing in Sumatra, and the reason for this was ascribed by the English factors in 1671 to the fact that at Batavia there was more money, better variety of goods, and less restrictions on trade, which induced the people to go there.[71] If this was the situation in South East Asia in the 1660s and 1670s, it was likely to be even more competitive in western India, where the number of buyers was much greater. As Aungier wrote to the Company in 1677, 'We take due notice of what you advise touching the low price of pepper in Europe and your orders to bring down the price here alsoe — wherein we have not bin wanting to use our best endeavours; but without success. For there is so great a consumption of pepper in these Countrys and so many dealers therein, who transport it to forreigne parts, as well that of Deccan as of Mallabarr, that it is impossible to lower the price to the rates you limit.'[72] During the next century conditions in Malabar were not very different, though in Sumatra the producers no longer had the benefit of competitive trading.[73]

14
IMPORT OF BULK GOODS

The general role of bulk goods

Apart from pepper the East India Company imported a number of other bulk goods, often described in the records as coarse or gruff goods. Indigo and saltpetre were the most important among them. Although the first ceased to be imported regularly after 1712, saltpetre continued to be in demand throughout the period, and its procurement came to occupy a sensitive place in the correspondence between the Court of Directors and the Bengal servants. Among other commodities which appear on the Company's import list of bulk goods were the various kinds of gum resins - aloes, myrrh, lac, and olibanum - benzoin, cotton yarn, redwood, sandalwood, sugar, and wool from the Kirman province of Persia. If pepper and calicoes were the staple items of the East India trade in the seventeenth century, these goods also served to diversify the commodity base and added an exotic touch to the Company's regular sales in London. But the direct commercial appeal of the bulk goods was far surpassed by their indirect importance in the Company's trading system. It has already been pointed out that even pepper, which had an independent and continuous demand in European markets, performed almost as vital a role in the economic calculations of the Company's shipping as ballast cargo. However, pepper was not obtainable everywhere. Nor was it always convenient to tranship it from one port to another because of the risk of damage. Pepper was generally shot loose between the bales in the ships' holds and the movements of the bales tended to grind the peppercorns into dust. Saltpetre on the other hand was a non-perishable chemical, impervious to rough handling, and admirably suited for ballasting the East-Indiamen. Lading ships with saltpetre and other gruff goods prevented the expensive method of providing ballast in the form of iron, which did not yield any revenue and contributed nothing towards the cost of unutilised shipping space.

These economic considerations were frequently reiterated by the Correspondence Committee when the Asian factories sent home half-laden ships. In 1676, for example, the Committee carried out a detailed review of the Company's policy on how its ships were to be laden and the failure of the Fort St George Council to comply with those instruc-

tions. For in this year five ships arrived back from the Indies with a large amount of 'dead freight', despite the detailed alternative plans sent out in December 1674. Of course the Company was also aware at the time that the total shipping being despatched to the coast of Coromandel and Bengal was greater than the estimated tonnage of goods ordered in the outgoing lists. Why was an excess of shipping sent out in the first place? The question was answered in one of the earlier letters and repeated in that of 1676. The Court had planned to send out in 1674 £200000 in treasure and goods and it was absolutely imperative that the risk should be spread among as many bottoms as possible and that the fleet should have sufficient strength to resist possible enemy action.[1] The point about the risk of shipwreck and the right balance between the coarse and fine goods on the inward voyage was stressed even more strongly a few years later when the Company enlarged the orders for Asian goods in order to combat the threatened competition from interlopers. After pointing out that the increased orders were partly inspired by the Company's concern for national welfare and the need to strengthen the country's merchant navy, the Court went on to remark, 'In which we find ourselves upon this dilemma, if we bring over great quantities of Turmerick, Lacks, or other grosse goods, we soone clogg ye markett to that degree, that they will not return us our freight, on ye other hand, if we enlarge our trade altogether in fine goods, which are most profitable, our tonnage will be so little that ye force of our fleets will be too weak for ye treasure of their loading.'[2] In the eighteenth century standing orders were issued on the maximum permitted value of cargo which a single ship was to carry. The fine and high-valued Bengal textiles were particularly singled out for risk-spreading and transhipment between Calcutta and Madras.[3]

Indigo

In the early seventeenth century, before the discovery of Indian cotton goods, indigo was the most important European import from the subcontinent. Its share in the opening decades of our period was still substantial and greater than that of saltpetre. But because of a smaller ratio of cost to sale price, indigo yielded a smaller revenue than the latter. The dye was known to the European textile workers for a long time, though in the sixteenth century its use was perhaps more widespread in the Mediterranean area than in west European countries.[4] Gradually, it was discovered that indigo, along with woad, cochineal, and madder, provided a dye of substance, a fast blue as opposed to the fugitive colouring obtained from logwood treated with alkali.[5] The later popularity of indigo rested on its relative cheapness. The eighteenth century French expert on dying and dyestuffs, Jean Hellot, mentioned in his work that

even in his time there were dyers, 'prejudiced in favour of old customs', who believed that the blue made from woad alone gave a much better colour than one made from a mixture of woad and indigo. According to his calculations, four pounds of fine indigo from Guatemala meant that one vat of indigo dyed as much material as two vats of woad.[6] Hellot's description of the hot and cold processes in indigo vat-dying show that the dye required a different technique from the traditional vegetable and mineral dyes used in Europe, and by his time the whole art had reached a considerable stage of advancement.

India of course was not the only country which produced indigo, though Hellot was inclined to think that the Ahmedabad and Agra variety was one of the best. The main problem faced by the East India Company in its indigo trade was that from the middle of the seventeenth century the Indian imports began to encounter strong competition from the products of the West Indies and Spanish America. The plant was discovered or introduced into the New World by Spaniards and later extensively cultivated in Mexico, San Domingo, and Honduras.[7] In 1670 the Surat Factory, which was responsible for supplying indigo, received a warning from the Company that buyers in London were complaining about the quality of the Indian variety as against the imports from America. If a remedy was not found, the price would depreciate and discourage the Company from importing indigo from India, because 'we stand in competition in this commodity with Spaine, Barbadoes, and other English Plantations'.[8] The frequent reference to the need for maintaining the quality of the product brings to the forefront a problem that was shared by cotton textiles also. As long as there was more than one supplier and there were substitute products, the elasticity of demand for a particular commodity remained high, even in the case of an intermediate industrial material such as indigo. The partial elasticity was a function of both price and quality, which were substitute variables. The Company also had to take into account the impact of good demand and high prices in Europe on the elasticity of supply. The American producers, geared to the European markets, were obviously sensitive to price changes, and the Court feared in 1671 that the prevailing high level of demand would induce the West Indian and Spanish plantations to produce more indigo, which would sooner or later lower the price.[9] The Company's answer to competition was the familiar exhortation to the Indian factories to buy it cheaply. As in the case of so many other Asian imports, the level of costs and market share were inexorably linked together as determinants of the profitability of indigo.

Given the restricted nature of the market, the Court of Committees had to solve the question of interrelating the quantity of imports with the selling price. In the 1660s price ceilings were widely used to control

supplies. To take only one example, in 1663 the Company ordered the Surat Factory to send home 100 bales of Lahore indigo and 50 bales of Sarkhej if the prices were above the pre-determined limits. But these quantities were to be doubled if the Lahor variety could be purchased at ij *mahmudi* (4/9 of a rupee or is equalled 1 mahmudi) per bale and the Sarkhej at 0.75 mahmudi.[10] It is difficult to establish precisely how the Court arrived at these figures. It is possible that the whole exercise was based on nothing more than guesswork. On the other hand, long experience of the nature of the market may have enabled the Company to devise accurate decision rules which guaranteed that any prospective losses were kept within acceptable bounds. Although we do not know the Company's method for constructing the demand curve facing indigo, we do have information from the end of the century on how the profit and loss on indigo was calculated. In 1698 the Company ordered its accountant to prepare a statement on the recent sale of indigo for the information of the servants in India. The method was simply to add together all the charges including interest on capital, freight payment, and customs duty, and deduct the total from sales revenue. The prime cost in 1698 was 1 i|d per lb and the selling price 2s. At these rates indigo actually yielded a loss of more than 15 per cent (see Table A. 14).

Table A. 14. ***The prime cost and charges of indigo brought home on the*** **King William** ***1698***

Costs		Revenue	
Indigo fine quantity 711 lb 11 id per lb	£34 3s	Sold 704 lb at 2s	£70 8s od
3 years' interest at 6 %	£ 6 3s	Discount 6|%	£4 us 6d
Freight of 6-1-11 (12 a ton) £34 per ton	£i7 19s gd	Total	£65 16s 6d
		Loss near 11 %*	£12 4s 9d
Custom and additional duty	£i7 15s 6d		
Charges general	£2 os od		
Total	£78 is 3d		£78 is 3d

Source. Despatch Book, 24 August 1698, vol. 93, p. 10.
Note. *This figure seems to have been wrongly calculated. The real loss on the total costs was nearer 15.75%.

The general decline in the selling price of indigo during the second half of the seventeenth century was quite remarkable. At the beginning of the century the superior quality Agra indigo fetched a price above 5s per lb while the Sarkhej indigo sold between 4 and 5s per lb. In our period these prices were realised only in exceptional years when wars or piracies at sea disrupted the regular traffic with the New World. But it is quite clear from Table A. 14 that the high level of duty on indigo was a serious charge on total costs. With transport and tax accounting for 23

and 22.7 per cent, respectively, of the total costs, the Company needed a minimum selling price of 2.4s per lb in order to break even. Similar calculations must have been made throughout the period, and the opening of the sea-routes and the decline in prices following the end of the European wars in the second decade of the eighteenth century may explain the disappearance of indigo as a regular import from India. Between 1665 and 1712, however, the volume of total imports was quite considerable.

The period of fastest expansion occurred in the 1670s, but the Company complained at the same time that the high cost price made Indian indigo relatively unprofitable. By 1675 the selling price in London had fallen to a low level and the weak state of the market seems to have persisted until 1681.[11] In common with pepper, indigo also seems to have suffered from an oversupply in these years, and as the quantities imported gradually declined, the sale price slowly improved. By 1683 indigo had become profitable again and the Court ordered the quantities to be sent back from Surat to be doubled. The high prices soon turned indigo into one of the most sought for bulk commodities. On the eve of the war with Mughal India in 1687 the Company was predicting that the demand was likely to remain strong in the immediate future, in spite of the fact that the large gains made in the trade had encouraged an unprecedented volume of imports from the West Indian plantations and overland through the Levant.[12] In the last decade of the century, just when the market recovered and went from strength to strength, the Company's own imports of indigo became highly erratic and quantities dwindled sharply. In 1690 the imports were only nominal, and for the next two years nothing was sent from India. In 1693 there were some substantial imports, followed by a break of three years. The Company on its part urged the Indian factories in this period to stretch their credit in order to provide indigo.[13] While the Company received only small amounts of Indian indigo in these years, the West Indian imports seemed also to have remained depressed, partly as a result of an exceptional rise in freight rates between Europe and the Caribbean because of wars. The rates to Barbados or Jamaica, which in peace time were normally £3 to £5 per ton, had risen to no less than £24 per ton in 1691,[14] To these economic costs must be added the actual shipping losses at sea. In 1695 the Court commented that indigo continued to be a 'great commodity' because one of the West Indian ships sailing in convoy from Barbados was lost in a hurricane and another French ship with 1000 barrels of indigo on board was sunk by English men of war.[15] It is remarkable that in less than five years price rises in Europe should have turned indigo from a low-value, bulk commodity into a high-value cargo with large profit margins.

There is evidence, however, that in India indigo was no longer an in-

expensive product. In the eighteenth century, until the beginning of the great boom in the 1780s, Indian indigo was imported into Europe only sporadically. Its function was mainly to act as make-weights in the Company's total shipping tonnage, and the article did not always clear costs in the London sales. A comparison between the cost prices paid during the seventeenth century with those current in the first half of the eighteenth demonstrates that the value of indigo had almost doubled in the subcontinent. In 1676 a price of Rs 37 per Surat maund (40 lb) was regarded as a high price, but in 1713 indigo was selling in Surat at Rs 70 per maund. In 1757 Lahore indigo was reported to cost as much as Rs 100-110 per maund.[16] The average price of Gujarat indigo during this period appears to have been Rs 50-60. How can we explain the apparent rise in prices ? The most obvious reason would seem to be an expansion in the consumption of the dye in India itself and possibly also in the Middle East. This could have occurred only if there was a corresponding expansion in the textile industry of these areas.[17] We know that the Indian cotton weaving and finishing industries expanded phenomenally in the century from 1660 to 1760, and in the Middle East also new areas of production appeared. The main problem with this explanation lies in the awkward question of why the supply did not keep pace with the demand. Indigo was not suitable for cultivation in all parts of India, but even in the existing areas of growth there was probably still enough land available to make it worthwhile for the peasants to switch to a high-value cash crop. Although direct evidence is lacking, it is possible to suggest, as an alternative explanation, that the price of indigo was raised by an increase in the road tolls and the rate of land revenue demand on indigo cultivators, which could have added substantially to costs.

Whatever the real reason, the Court of Directors noted in 1719 that the price of the dye had risen very strangely in India and it limited the Surat Factory to a ceiling of Rs 50 per maund. As indigo was always bought for cash and took up a great deal of capital, it was to be provided if there was a surplus of funds after the Guinea textiles and cowries had been purchased.[18] By this time the expensive Agra indigo had virtually disappeared from the Company's import lists, though in the earlier years its share was generally greater than that of the Gujarat variety. The preference given by both the English and Dutch Companies to north Indian indigo stemmed from its better quality. The Sarkhej indigo always had a heavy and accepted admixture of sand, which explains its relative lower price.[19] The Agra indigo on the other hand was processed in a pure form and if it contained sand or other impurities, this was done fraudulently to increase the weight, though Francisco Pelsaert, our Dutch informant on the indigo industry of Bayana, admits that it could happen accidentally if the wet balls were left to harden on

sandy soils.[20] Although, in the English records, Agra or Lahore were indiscriminately used to describe north Indian indigo, it is evident from Pelsaert's careful account that most of the dye purchased by European traders came from the district around Bayana, near Agra. The true Bayana indigo again was produced near the town itself and the total quantity was limited to about 300 bales a year. The superiority of this indigo was attributed by Pelsaert to the brackish water of the wells near the town. Apart from the district of Bayana, indigo was also produced in large quantities in areas near Aligarh, but it was bought mainly by Armenian and Pathan merchants and avoided by Europeans.

In purchasing indigo the price and quality were naturally the two most important factors the buyers had to take into account, and Pelsaert like most conscientious Dutch servants of the V.O.G. raises the question of whether European merchants should purchase direct from small producers in the upcountry districts or whether they should rely on the existing organisation of the market.[21] His recommendation was that in a good season when the harvest was good the Dutch might send one or two experienced agents into the villages to make direct purchases, but when the crop was short, it was advisable to remain quietly in the main district town and buy from the substantial Hindu or Muslim merchants, who had already made forward purchases from the peasants on the basis of advance cash payments. This was a point that was stressed by the Company's own broker in 1672 when the Surat Council was considering the best method for buying indigo.[22] The English method at this time was invariably to use the service of the broker or other Indian middlemen to procure the dye, as the Company for reasons of economy refused to keep its own servants in the indigo districts for making direct purchases. As Aungier pointed out in 1674 when the Court complained that the indigo imported by the Dutch was better than what the English bought, 'We buy our indigo of ye same townes, of ye growth what is made. But this advantage they have of us, for they have Dutchmen that assist at buying their goods at said places, who may probably pay deare to procure the best or garble it after bought, whereas we are forced to trust Bannians or *Cuttarees*, who buy at the markett price, as Armenians, Persians, and other merchants do, being no wayes carefull to garble it least they should enhaunce the price and fall under censure for paying too deare above the market rate. Had we English servants of your owne to looke after buying it, you may reasonably expect it better than it is.'[23]

Saltpetre

Although indigo was always listed by the Correspondence Committee during the period of its import along with other gruff goods, there was some doubt as to whether it could properly be described as a true bulk commodity. With saltpetre there was no question at all; for reasons already mentioned it was the ideal ballast for ships and had a considerable commercial value as well. The export of saltpetre from India in the seventeenth and eighteenth centuries was a new development in the history of the subcontinent's maritime trade. Its bulk and weight, of course, made it a prohibitively expensive commodity to export overland. Even within India, saltpetre could be transported economically from one region to another only by water, and this fact may explain the reason for a chronic shortage of gunpowder in some areas of India. One of the curious features in the political relationship between the European trading companies and the local Indian rulers was the intermittent demands for powder and other forms of munition, which acted as a sensitive barometer of mutual goodwill.[24] It is clear that Dutch and English demand for Indian saltpetre was closely connected with national political and military considerations. It has been suggested that by the early seventeenth century supplies of indigenous saltpetre in Europe were running short of requirement, especially in view of the progress in the art of warfare.[25]

That saltpetre was a profitable commodity in the second half of the century is indicated by an exceptionally high ratio of cost to selling price. The average mark-up, which seldom exceeded the ratio of i: 2 in the case of textiles, the largest revenue yielder in the Company's trade, was almost always in excess of 114 for saltpetre. The reason is not difficult to guess. This was the period which saw many wars in Europe, both by land and sea, and the Company's saltpetre was often sold in bulk to the government at favourable prices.[26] In 1664 the Lord Treasurer proposed to the Company that its usual custom of selling saltpetre by the candle should be waived and the entire quantity sold to the government. The negotiation which followed the proposal shed highly interesting light on the way the Company's business decisions were taken. The government's request was clearly seen as something of an innovation, and the first reaction of the Court of Committees was to call a general meeting of the shareholders in order to obtain the necessary authority for treating with the king. The General Court readily gave their consent, possibly because the members read into the proposal an intention on the part of the government to prepare for a war with Holland.[27] When the government offered a price of £3 per cwt for the Company's saltpetre, the Court insisted on their previous demand for £3 5s gd with 12.5 per cent discount for refining losses. Three arguments were put

forward to support the Company's claim. It was pointed out, first, that the government's offer price was less than what the commodity was worth in all the European markets, allowing a reasonable margin for risks, charges, and profits. Secondly, the net profits would be so low at £3 per cwt as to act as a disincentive to increasing the quantity of saltpetre imports from the Indies. The Court believed that the Company was entitled to some special consideration for taking steps to make England the 'magazine' of saltpetre which a short while ago was imported from the Continental countries at a price of £6 per cwt. Finally, the Committees of the Company were trustees for the entire body of shareholders, many of whom were widows and orphans, whose legitimate interests must be taken into account. The Lord Treasurer must also bear in mind that the price at which saltpetre was put up at the candle was not the selling price but only the 'candle appraisement[5]; for in the actual auctions the article was expected to advance 20—25 per cent and sometimes as much as 50 per cent on the reserve price because of competitive bidding. It was the policy of the Company to set the offer price of its commodities at a much lower rate than the market price on purpose to invite many buyers to bid one against the other.[28] In the end the Court of Committees accepted a price of £3 is per cwt. The saltpetre was to be delivered to the king unrefined and the payment was to be made out of the Company's customs dues.

The agreement of 1664 provided a precedent for such future sale of saltpetre to the government, though the price was renegotiated on each separate occasion. The royal contracts also removed any fears the Company might have had that the demand for saltpetre would lessen in England, putting a check on the Company's trade.[29] But in the late 1660s the total volume of imports was not a serious issue before the Court of Committees. It was much more concerned with the question of how and where the saltpetre was to be provided in India. In the first half of the seventeenth century, the European Companies obtained their supplies mainly from Gujarat and the coast of Coromandel.[30] Reference to the manufacture of saltpetre in the Ajmer district of north India can be found in the accounts of European travellers during this period. In the south the kingdom of Golconda was an important source, as was also the country around Gingi.[31] However, the most important and substantial producing region for saltpetre was neither in the north nor in the south. It was concentrated in a few districts of Bihar, near the provincial capital of Patna. Bihar saltpetre was both cheaper and of better quality than the product of other parts of India, and its transport to the sea ports was made much easier by the proximity of the Ganges to the source of supplies.

From 1664 the annual quantity of saltpetre ordered by the Company began to rise rapidly, 500 tons being specified in this year. By 1669-70

the actual imports were over 20000 cwt, and it is evident from the Company's outgoing letters that the most important factor regulating the supplies on the demand side was the condition of war and peace in Europe. This was made quite explicit in 1673 when the Company complained that Bengal was sending too little saltpetre, it being a 'time of war'.[32] In the boom year of 1682, when the orders for all East India commodities were sharply raised, the indent for saltpetre also reached a record figure at 1500 tons. As a result the imports in the 1680s remained at a high level until the outbreak of war in India drastically interrupted the supplies. With the restoration of commercial relations with Mughal India the quantities gradually began to build up. The concluding of peace in Europe in 1698 predictably enough depressed the market, and the Company asked the Bengal Factory not to send home more than the charter-party tonnage in saltpetre as it was a dull commodity and large stocks were lying unsold in the warehouse.[33]

In the eighteenth century, similar considerations continued to dominate the Company's saltpetre trade. When wars were resumed in 1703, it became at once a profitable article of trade. Furthermore, the new charter contained a clause obliging the Company to supply the Crown with 500 tons a year.[34] The imports which had fallen to a low level at the turn of the century regained the former volume from 1705, though by 1708 the Directors were once again complaining that the price of saltpetre had fallen considerably. As the war years drew to a close, the demand slackened and stocks began to accumulate at an alarming rate. The anxiety of the Company, frequently expressed in letters to India, was understandable since saltpetre was hitherto both a profitable and an essential commodity.[35] There was one letter in particular, written to the Madras Council in 1713, which gave the reasons for the Directors' fear that the saltpetre market was about to break. 'Saltpetre of late has fallen in price and would more if we did not resolve to put it up at a good rate, as knowing the buyers will take only what they want for the present spending for what they buy is but at the bare advance. If the war should speedily end we are in doubt whether the Government will demand 500 tons annually. We have now in warehouse 21,686 bags, and the yearly home consumption besides is little above 200 tons.' The Company could not of course put the safety of the ships at risk by not lading them with heavy goods. But the guideline from now on was that 'the less petre we have the better'.[36]

The volume of imports for the next quarter of a century from 1712 fluctuated between 10 000 and 15000 cwt, though in two exceptional years, 1727 and 1732, the imports were in excess of 20000 cwt. The annual variations in quantity were now dictated by conditions at the supply end and the volume of shipping being despatched from the Indies. The demand in Europe remained depressed.[37] It was not until

1733 that the total imports began to display an upward trend. In 1735 for the first time since the war there was reference to good demand both from the Crown and the private buyers in town,[38] but it required the commencement of another war to stimulate the imports to any real extent. In the spring of 1740 the Court of Directors informed Calcutta that it was highly pleased that steps had been taken in Bengal to secure a large supply of saltpetre for the Company, for at home 'the Government doubled their demand on the present war with Spain, which will always be the case when England is engaged in disputes with the people in Europe'. In order to prevent any possible public criticism that the East India Company was failing to fulfil its duties to the nation, the Court should be in a position always to supply the necessary war-time demands.[39] Next year these instructions were repeated with the added information that if England were to engage in war with France the orders would be increased yet again.[40] In 1741 the imports had jumped to nearly 33000 cwt, reaching 53162 cwt in 1743, which was an all-time record for our period. The large quantities received in these years together with a rise in cost price induced the Company to reduce the orders in the late 1740s.[41] But by 1755 the imports began to increase again, and the Court gave orders to send back as much saltpetre as the Indian settlements were able to obtain from Patna.[42] In these years the Company showed itself particularly sensitive to the level of cost price and sometimes took the unusual step of preparing quantity schedules at various specified prices which the Calcutta Council were to take into consideration when purchasing saltpetre. This procedure was more reminiscent of the early indigo orders.

In spite of the Company's repeated closure of the Patna Factory, it was apparent to all European traders that for the lowest cost price saltpetre must be provided directly from Bihar. The quantities available in Hugli at short notice were always small, and it was highly risky to rely on the local spot market for the kind of supplies required by the Dutch and the English for their large European ships. Alexander Hume, the Chief of the Ostend Company, discovered to his cost that, if saltpetre was not contracted for before the arrival of the ships, there was little likelihood of a speedy turn-round. The rough treatment which he received from black merchants heightened his rage at not being able to store the supplies delivered for lack of warehouse space.[43] There was keen competition even among the two substantial European Companies for the service of the saltpetre contractors, and examples were not lacking of *assamies* (men who extracted and refined saltpetre) deserting the service of one Company for that of the other. The deserters were often imprisoned or fined by the local government officials who were themselves corrupted by bribes given by the particular aggrieved European factory.[44] As a means of settling such disputes and also preventing possible

defaults, by 1728 the saltpetre assamies were organised into a 'Company' serving both the English and the Dutch, and there was an increasing tendency for the European buyers to reach an agreement among themselves so as not to bid up the prices. The English Company regarded the formation of a joint-stock arrangement for its saltpetre supplies as a most advantageous development, as it provided a flexible way of varying the quantities without having to take into account continually the level of Dutch purchases.[45]

With the appearance of the French Company in Patna in 1735, the saltpetre market received a new competitive element. While the English Council at Patna joined with the Dutch in making an application to the nawab for restricting the amount of saltpetre to be supplied to the French, the Court of Directors in England reacted to the news of French purchases with equal alarm.[46] The emphasis on containing the rising cost price of saltpetre which becomes marked in the 1740s and 1750s arose from the Company's awareness that the staple article of Patna trade was undergoing some fundamental changes in organisation. Faint indications begin to come to the surface that the rise in European demand was causing the big Indian merchants to move into the business. In 1736 the three European nations concluded an agreement whereby it was decided that no Indian traders living within their political jurisdiction were to be allowed to buy saltpetre in Chapra, Purnea, or any other aurang as far as Malda.[47] But the first concrete evidence that the saltpetre trade and the world of high finance and politics were coming together dates from 1740. In April the Fort William Council received a letter from Humphrey Cole, the Chief of the Patna Factory, outlining a strange story of violence and intrigue involving the English, the Dutch, the local Mughal faujdar, the assamies, and Omichund, the notorious Calcutta merchant, who was later to engineer the Plassey Revolution. The English and the Dutch found themselves on this occasion as respective supporters of opposing local factions, and the incident of 1740 left a bitter taste in Anglo-Dutch relations in Bengal.[48] No joint purchases were made for the next two years, and it was only in 1743 that the differences were patched up. The sharp rise in the price of saltpetre was attributed by the Patna Factory to these disputes among the Europeans and the involvement of Omichund in the saltpetre trade.[49] By 1745 the latter's brother Deepchund had become the faujdar of Chapra and was in a position to harass the assamies traditionally supplying saltpetre to the Europeans in order to force them to sell their stocks to him alone.[50] Deepchund's saltpetre dealings were totally unauthorised.[51] However, the political condition of Bengal was such at that time that the private use of force and generous bribery opened all doors to speculation, and even the Dutch Council was forced to buy its saltpetre from him. It was perhaps no accident that the year of Plassey brought its retribution to

Omichund as it did to another great saltpetre magnate, Khwaja Wazid, who had begun his dealing in the commodity as an agent of Deepchund. Both the English and the Dutch Companies had ample reason to resent the way the two brothers, Omichund and Deepchund, along with the Armenian Wazid, had manipulated the saltpetre market. It is true that the European counter-policy to contain their influence involved the use of identical political methods, including an attempt to capture and imprison Deepchund in Calcutta, but as long as there was an independent government in Murshidabad and Patna such attempts remained abortive. The high price which the East India Company paid for its saltpetre in the 1750s was the inevitable result of the fusion of political and commercial forces that characterised the dying years of Nawab Alivardi Khan in Bengal.

15
RAW SILK

The product, areas of supply, and trends in European demand

The import of raw silk from Persia, India, and China by the European trading companies in the seventeenth and eighteenth centuries sharply underlines the technological difference between the production of silk and cotton piece goods in a pre-machine age. The trade in silk yarn and other materials within Europe as well as from outside owed its existence to the development of a silk weaving industry in Italy, France, and later England. The silk-producing centres of Italy were not new. But the successful establishment of the industry in Western countries contrasting with the failure to create a comparable cotton textile craft needs some explanation. A tentative hypothesis about the diverging history of the two crafts may be sought in the qualitative difference between raw silk and raw cotton as basic ingredients in spinning yarn. The twisting of silk thread out of the fibres reeled from cocoons was a less difficult process than the manufacturing and preparing of yarn from raw cotton which was to be used in weaving fine high-quality cloth. The grading of the yarn and the relative variations in texture were to a great extent pre-determined by the silk moths and the exact quality of the thread was less a function of human dexterity. The fact that silk rearing was a practicable art in Europe not only made it possible to rely on local supplies of the raw material but also encouraged experimentation in manufacture. Italian spinners had learnt the use of water-driven machinery in the throwing of organsin - the warp - during the fourteenth century, and the knowledge of the technical processes slowly spread to France and then to England.[1] The silk industry was always a capital intensive one, and the high value of the finished end-products relative to total labour costs made it easier to compete with silk goods imported from India and China with their allegedly low-wage industrial economy. Even so the reaction of the London's silk weavers to the East India Company's imports at the end of the seventeenth century directed public attention to the adverse effect of Asian competition; a fact never denied by the defenders of the Company.[2]

Since England lacked an indigenous source of supply, the Company's trade in raw silk could not be criticised on the same ground as its trade

in piece goods. It was admittedly paid for largely with an exportation of treasure, and silk was an expensive article of consumption, both of which offended the contemporary economic pamphleteer anxious about the growth of extravagant habits and the country's balance of trade.[3] But as long as there was a substantial silk industry in England, the basic material had to be imported from France, Italy, or the Levant. The extent to which silk weaving was an integral part of European craft skills is seen in the easy mobility of weavers and other workers. The migration of Flemish artisans in the sixteenth century was first responsible for its transplantation to England. The influx of Huguenot refugees subsequently strengthened the industry, and by the end of the seventeenth century Canterbury and Spitalfields had become major centres of silk weaving. The prohibition Acts of 1700 and 1720 directed against the wearing of silk as well as finished cotton textiles imported from Asia may have given a positive encouragement to the domestic production, although in view of the possibility of smuggling and direct evasion of the laws it is difficult to measure precisely the effects of the protective Acts. The East India Company itself was bound by its own internal commercial calculations to see a balance being kept between the imports of finished silk piece goods and raw silk, which was an important contributor to sales revenue. What is certain is that the industry was able to survive and its growth was accompanied by a similar progress in the art of silk throwing. In 1719 the first proper factory for twisting raw silk based on the Italian water-powered technique was set up in Derbyshire by Thomas Lombe.

It is ironic that the application of machinery to the manufacture of silk yarn pre-dated the innovation in cotton spinning, while the mechanisation of the weaving process seriously lagged behind the cotton textile industry in the second half of the eighteenth century. Apart from technical problems, the limited market for silk goods and constraints on the supply of raw material restricted the industry to the traditional methods for a longer period. Before the rise of north European trade with Asia round the Cape, silk weaving in Europe was entirely dependent on the supply of filaments from Italy, France, and Persia. The great silk-producing district of Persia, Gilan in the Caspian, was a prime commercial target for the overland Levantine traders, just as the wholesale market in Aleppo was indispensable to European merchants trading with eastern Mediterranean. This was a branch of commerce which the Portuguese had been unable to touch, and it was left to the Dutch and the English to make a bid for diverting the Persian silk trade from the caravan to the oceanic route. By the first decade of the seventeenth century, Chinese raw silk had been added to the list of the types available in Holland and it was obviously fetching a high price.[4] While the V.O.C. in the early years of its trade concentrated on the import of

Chinese silk from South East Asia, the English Company turned mainly to Persia for its supplies.[5] Iranian raw silk was an article with which many members of the Company were familiar through their association with the Levant trade, and from 1617 the Court of Committees began to receive highly encouraging letters from its optimistic Agent in Persia, Edward Connock.[6] However, most of these early projects for diverting the Persian raw silk trade remained unrealised and the East India Company received only modest quantities of the material up to the 1640s. It may seem a fortunate coincidence for the Company that just as its trade in Persian raw silk declined, the rich commercial potentials of Bengal were opened up to its servants, for the plains of northern Bengal were famous throughout India for the production of silk and the filaments exported from Kasimbazar, Malda, and Rangpur kept looms busy as far away as Ahmedabad and Chaul. But in reality, for nearly three decades since the Company thought of discontinuing its trade in raw silk in the 1640s, its investments in the product of Bengal remained in a state of suspension. It is possible that the declining profitability had damped the Court's enthusiasm. The limited funds available in these years were fully committed to the purchase of pepper, saltpetre, and Indian cotton piece goods. There was also a strong and rising demand in Europe for the finished silk fabrics manufactured in the district around Kasimbazar, which competed favourably with the silk goods made in Italy.[7]

In common with cotton textiles, a sustained expansion in the Company's import of Bengal raw silk did not begin until 1670. Even in this year the total quantity was only 7087 lb of 24 oz (5637 kg) valued at £2176. Raw silk accounted for only 1 per cent of the total import value. In terms of volume, the time-series on silk, including both Bengal and Chinese imports, can be divided into three irregular chronological phases. The period from 1664 to 1685 is marked by a rapid but highly uneven progress. Supplies were disrupted during the years of Mughal war and it was not until 1699 that the volume of import recovered to a substantial degree. During the rest of our period - from 1700 to 1760 - raw silk remained as a valuable item in the Company's trade, though there were a number of years when the total quantities record a severe shortfall. In addition to Bengal, Chinese silk was also imported through Bantam and it was one of the standing articles of trade in the voyages which the Company organised to the ports of mainland South East Asia and China during the last quarter of the seventeenth century. In 1672 William Gyfford, the Chief of the Tongking Factory, wrote a full report on the silk industry of the region and pointed out that the Dutch annually purchased large amounts of the raw filament for exporting to Japan.[8] After the English were expelled from Bantam, apart from the intermittent expeditions to China, the factory in Tongking, which was

kept going until 1697, remained as the Company's only regular source for the supply of Chinese raw and wrought silk.[9]

The resumption by the East India Company of its old interest in the raw silk of Asia in the 1670s was unwelcome news to the Levant Company, the members of which treated the development as an encroachment on their area of trade. In their petition of 1681 to the Privy Council, complaining against the Company's activities, the Turkey merchants alleged that among other harmful imports the East India Company was responsible for bringing home a kind of counterfeit raw silk, obviously a reference to the products of Bengal which were still relatively unknown in England.[10] The charge of the Levant Company was answered with characteristic bluntness in a contemporaneous pamphlet, 'The truth of the case at bottom is but this: the importation of better and cheaper raw silk from *India* may probably touch some *Turkey* merchants' profit at present, though it doth benefit the kingdom, and not hinder the exportation of cloth. What then? Must one trade be interrupted because it works upon another? At that rate there would be nothing but confusion in a nation *ad infinitum*.'[11] The popularity and the quick acceptance of Bengal raw silk in Europe, as the pamphlet rightly emphasised, was undoubtedly the result of its lower cost as compared with other types of silk in the market. But it is equally evident that variations in quality ensured that the supplies from the different producing regions of the world were not entirely substitutable. If there was a certain amount of competition among them, it was a case of competition between a number of closely related but not strictly homogeneous products.

It was stated earlier that spinning yarn from reeled raw silk was a less challenging task technologically than the preparation of thread from raw cotton. Silk does not require carding, and the treatment of the yarn before weaving was not as laborious a process as the manufacture of fine cotton cloth. The transparency and lightness of the Dacca muslins were achieved through very careful quality control of the thread used.[12] On the other hand, the matching of different grades of silk filaments to produce a uniform thread of a given quality and length was a very delicate operation and called for a high degree of skill on the part of the raw silk spinners. The problem could be made simpler if the silk drawn off from the cocoons was reeled into recognisable grades, differentiated by fineness and length. For Bengal silk this was an area where some difficulty was experienced at first. In 1670 the Company informed the factors in Bengal that the silk imported from India and recently sold in the auctions was found to be unsuitable Tor our manufacturers here in England' and had to be shipped off to foreign markets. The fault lay in the fact that silk of varying fineness and lengths was reeled together in the same skeins. Instructions were issued to keep the coarse and fine

threads separate in future and to wind them into regular lengths of yard-long skeins.[13] Within a few years the raw silk of Bengal became an established item in the Company's public sales in London, and in 1673 the total imports amounted to 21874 lb. The prices were high in these years, the ratio between cost and sale prices being 1:2.84 in 1673. The market for Indian silk was beginning to widen and in December 1674 the Company ordered £20000 to be invested on the commodity in Bengal. The Company had also discovered that the province produced more than one variety of silk, and the Kasimbazar Factory was asked to send back samples of the most common type of silk-based thread known in Europe as the floretta yarn.[14]

The mark-up on the cost price of Bengal silk continued to be high between the years from 1673 to 1682, and the profits were large in this period. The highest price was paid in 1677 when Bengal silk fetched £1.15 per great lb. The import and sale of Chinese raw silk was erratic in these years, but its greater first cost was not compensated by a correspondingly higher selling price, which remained in the same range as the Indian variety. The pattern of bidding at the auctions and the level of realised prices invariably provided the buying committees of the Company with the chief guidelines on the volume of imports. The two internal decision variables, the quantities demanded from London and the level of cost prices paid in India, were adjusted according to the buyers' response at the auctions.[15] The determination of prices in London at a subsequent period was a function of autonomous factors such as the sale of silk by the Dutch Company, the supply of Persian silk through the Mediterranean, and the current prices of Italian silk. The Company could of course influence the market by varying the amount of silk offered for sale, though this was necessarily a short-term corrective. The real problem which the East India Company had to face in organising its silk trade during the last two decades of the seventeenth century was that not of an oversupply but of persistent shortfalls caused by wars at sea and other unpredictable accidents. As we can glimpse from the controversy between the Company and the Turkey merchants in 1681, Bengal silk was apparently making a rapid inroad into the existing market, though the possibility of new net demand arising from an expansion of the European silk industry cannot be ruled out altogether. By the summer of 1680 the Court of Committees had decided to embark on a policy of growth, and despatched a letter to India by the faster overland post, with the instruction to the Hugli Factory to step up the investment of raw silk. It was a commodity, which the Court believed, would always give a good return no matter how large the quantities imported.[16] Over the next twelve months the urgent necessity of increasing the silk imports from Bengal was driven home to the servants, who were repeatedly reprimanded for failing to supply an

adequate quantity, and there was always the reference to the market being unaffected by the level of supplies. It seems that the main demand for Bengal silk was in the middle and coarse range of threads and not at the upper end of the market. Unlike other bulk goods which the Company was forced to import for ballasting the ships even when the demand was saturated, the price of raw silk remained unaffected by the large volume of imports. The Company ascribed the reason for this unusual phenomenon to the universal use of silk in Europe and it was predicted in 1681 that even if two or three of the biggest ships were laden entirely with Bengal silk, the cargo could be sold without any material damage to the Company's profits.[17]

While the expansion of the Bengal raw silk was taking place in the 1680s, the connection between the Armenian merchants trading in Europe and the East India Company, which was forged in these years for the purpose of developing the sale of English woollens in the Middle East, provided a natural starting-point for the redevelopment of the Persian silk trade as well. The Bombay Council was asked to treat the Armenians with special consideration because, 'It will be a great thing to England if we can turn the course of the Silk Trade that used to pass through Turkey to come for Europe this Way.'[18] But the plans for the ambitious scheme were no more successful in the 1690s than they had been in the earlier part of the century.[19] It was only the products of Bengal and China which remained as the Company's staple silk imports. From 1687 the flow of silk sent from Kasimbazar began to decline drastically, though considerable quantities were brought back by the China ships. By 1693 the Company was writing to Persia and India that the disruption of the Turkey trade caused by European wars had given a great stimulus to the demand for raw silk.[20] The increase in sale price started from 1691 and the peak was reached in 1698 when silk sold at £1.67 per lb. There was a special reason for the high price of this year. The silk crop had failed in Italy and France, and the Company ordered the supplies from Bengal to be stepped up in the expectation that prices would continue to hold.[21] With the gradual return to normal condition in the Company's trade in eastern India, after the Mughal war, Kasimbazar was able to resume its predominant position. There was a slow change in the composition of the silk imported. The great boom of the late seventeenth century, as it has been seen, occurred in the importation of the coarser variety of filaments. The finer Chinese types sold less well and the demand was easily glutted.[22]

Even in 1709 the Company pointed out that the superfine silk of Kasimbazar, which was so popular in India, actually fetched a price 30 per cent lower than that of the coarser grades in London. The silk weavers of Norwich and other places where stuffs were made used the Bengal silk just as it was reeled, but the higher grades needed to be

twisted into thicker yarn, which made them uncompetitive.[23] Two years later the situation was beginning to change: 'We have of late forbade your sending us any raw silk No. A, because it would not sell occasioned partly by the quantity of fine China silk in Town which now is much lessened and partly because the manufacturers could not find the way of working it so easily as they did the B and C but now they are fallen into a better method and it begins to rise in value. Therefore you may send some that is to say half as much A as B and C.'[24] The increased demand for the finer variety may have been because of the improvement in silk twisting techniques which took place during the first half of the eighteenth century. The evidence from the Company's records throws some light on the technological factors involved, for in the instructions given to the supercargoes sailing for China, it was mentioned from 1730 onwards that Italian thrown silk or organsin used in the visible part of silk goods was being made in England and the twisting process required very careful grading of the single threads. It is evident that some sort of machinery was utilised in the manufacture of this type of silk yarn, and the Company preferred its Chinese raw silk to be as fine as it was possible to buy in Canton. The difference in selling price between the lower grades and the fine was much greater than the corresponding difference in cost prices.[25]

Technological development, product differentiation, and unequal rates of duties determined the nature of demand for raw silk in England. Many features of the Company's silk trade appear puzzling unless the relative influence of these different factors is kept in mind. The manufacturing industry at that time produced two separate categories of goods. The broad-silk weavers made proper fabrics, while the narrow-silk makers produced ribbons, buttons, and trimmings for fashionwear. Raw silk imported from the Levant and Bengal in the eighteenth century had a reputation of being inferior to Italian silk and was said to be used mostly for making buttons and stockings.[26] As we have already seen the finer variety of Bengal silk presented the English silk throwers with technical problems in spinning. As a result the double-spun Italian silk yarn had a particularly strong demand from the broad-silk weaving. In the eighteenth century similar products were being imitated in England, and Chinese raw silk was found specially suitable for the manufacturing of organsin used as warp. In 1730 in its instructions to the China supercargoes the Court of Directors wrote, 'The silk made for the warp or webb should be preferred before the sort made for the wooff or shute, the former being necessarily made of a much finer and better quality, because that only appears in the silk after woven, and gives the beauty, and the latter lies covered under it.'[27] Three years later the adoption of Chinese raw silk for imitating the Italian thrown silk was made more explicit. It was pointed out that of the raw silk imported

from China hitherto only one-eighth had been suitable for the 'purpose of the thrown silk of Italy'. The rest was of too large a size, resembling the Persian *sherbasse* silk and thus interfering with the trading products of the Levant merchants.[28] The memorandum also provided a detailed account of the method of silk reeling from the cocoons as a guide to the Company's silk buyers in China. The filament drawn from a single cocoon was held to be too fine by itself to be of any use. 'The Drawers therefore first throw a quantity of Cocoons into a basin of water standing over a gentle fire, and then unite such a number of single threads as will make the size of the thread they want, after which they draw it on a reel, a person twisting the several threads together whilst the wheel is turning in the same manner we see the yarn drawn in a thread from the wool.'[29] If there was uneven thread in the same skein, it was because of the carelessness of the drawers in the selection of the cocoons or deliberate design in adding more filaments to the thread so as to finish their work more quickly.

Raw silk which was reeled in this way would need several stages of additional preparation before it was ready for weaving. Most of the silk imported by the East India Company from India and China was reeled silk, though it was customary at that time to call it spun silk.[30] It seems that the method of reeling or winding the filament from the cocoons on a wheel was a European invention, for in 1755 the Kasimbazar Factory carried out an experiment using a machine. A bundle of warp silk was spun off from the pods on a wheel in its own premise. The process involved the use of unfamiliar equipment. As the Calcutta Council recorded in a letter, 'this manner of winding off silk is entirely foreign to the winders of these parts, and it was with some difficulty they could get proper hands to work the machine, which is made like those in Europe consisting of a furnace, a copper, a reel and a wheel. As this method obliges the workmen to more labour and attention than the usual method the silk turns out very dear though even'.[31] But the Kasimbazar people were confident that with greater experience of the machine the workmen would be in a position to reduce the costs, and the merchants could be induced to contract for silk wound off in the same manner. It must be realised that 'thrown silk' was very different from 'raw silk' of the latter type, and the former term was always used in the trade to designate Italian organsin or its equivalent. In the Company's memorandum of 1733 on the purchase of Chinese raw silk, it was specifically mentioned that the import of the finer grades would provide employment to the silk throwers at home, serve as a substitute for the Italian thrown silk, and would be no hindrance to the consumption of Turkey raw silk. Although Chinese silk was not doubled, the Company hoped that 'such case might be obtained in the Duty as should be required'.[32]

The last statement gives an indication of the reason for the sudden interest on the part of the East India Company in Chinese raw silk in 1730. The commodity was not imported every year, as this depended on the organisation of the voyages to Canton and the availability of supplies there, but the annual average quantity for five years from 1712 to 1718 was just over 11000 great lb. Between 1723 and 1725 it increased to 26000 great lb a year and in 1732 the actual imports stood at 77063 great lb. Since the seventeenth century the combined rate of duty and impost on China silk was 4s 9.3d per great lb as against is 1 i-5d on Italian and Bengal silk. The differential rate of duty obviously made it difficult for the Chinese product to compete in the home market and it was bought mainly for re-export, as there was a large drawback. But in 1730 the Company ordered a much larger quantity of raw silk from China on the prospect of being given some relief with respect to the duty in the approaching session of parliament.[33] These early hopes were disappointed, and 1732 was the last year before 1752 when there were substantial imports of Chinese raw silk.[34] While the duty in England remained unequalised, there was a shortage of supplies in Canton.[35] The supercargoes found in 1733 that the scarcity had pushed prices up to 13s 4d per great lb compared to an average of about 8s previously. Two years later the Canton market was still depleted and the high prices continued. The shortage was variously attributed to a blight on the mulberry trees and increases in the exports to Japan and the imperial capital at Peking.[36] By 1748 after many years of relative stability in the trade, raw silk prices began to rise sharply in England. There were new regulations against the export of silk in many Italian principalities and in Spain, which was one of the suppliers of cheap products. A petition addressed to the government in 1749, seeking a reduction of the duty on Chinese silk, pointed out that the excessive price of the raw material, which had gone up by an average of 30 per cent, was causing unemployment among the silk workers. The East India Company imported so little Chinese silk because of the direct effects of the differential rate of duty, and its abolition, the petitioners believed, would bring down the price of Piedmont and other Italian thrown silks by encouraging a greater volume of imports. The prohibition against the export of raw silk in Italy also had a most disruptive effect on the makers of organsin. Many expensive mills constructed in various parts of the country were working on short time 'for want of Italian or China silk'.[37]

The petition made it amply clear that the only substitute to the Italian raw silk for the manufacture of organsin was the variety imported from China. The arguments must have carried weight with the policy-makers, for 23 Geo. II. c. 9 equalised the rate of duty on Chinese raw silk with that on other types of imports. By another Act in the same year the Russia Company was empowered to import silk from Persia.[38]

The legislation produced dramatic results, and the East India Company's purchase of Chinese raw silk leaped to 184560 great lb (146809 kg) in 1752. During 1752-60 the total imports of the latter were 1 299338 great lb (1033564 kg) while the quantity of Bengal silk for the same period (1757 excepted) came to only 382072 great lb (303921 kg). The decline of Bengal to a position of secondary importance in the Company's silk trade in the 1750s was not surprising considering the unstable conditions created in the supply areas through political disturbances. But what is inexplicable is the Company's inability to supply raw silk from Bengal which could have been used for spinning organsin. In India the great silk weaving centres such as Benares and Ahmedabad, apart from Kasimbazar itself, obtained their raw material from north Bengal. There is no reference in contemporaneous European sources that the silk piece goods woven in these areas were inferior to the fabrics made in Italy or France. In the early years of the eighteenth century, the East India Company avoided the importation of the really fine variety of Bengal raw silk as a matter of policy, and it was only very slowly that it moved towards the purchase of 'Gujarat silk' in Bengal, a name given to the best and the most expensive type of filament available in the province.

It is possible that some technical factor associated with the quality of Bengal silk prevented its competitiveness with the products of Italy, and that the fineness of the thread was not the only consideration involved. Commenting on the different grades of Gujarat silk imported from Bengal, the Court of Directors remarked in 1732 that the reaction of the buyers to the new types offered for sale proved that they were only partially suitable for the home market. For example, the grades *A* and *B* were considered too fine for English 'throwsters' and as a result sold no better than the corresponding letters of the Kasimbazar variety. As the prime cost for these silks was high, there was little profit to be made from their importation. On the other hand, the lower letters C, Z), and *E* fetched prices comparable to those paid for the higher grades of Kasimbazar silk, and the London silk dealers believed that, had these been classified one letter higher, they would have sold even better. For the future the Court of Directors was willing to place regular orders for a number of bales annually, provided the silk was properly sorted. By 1735 Gujarat silk was so popular with the Company's buyers that the servants were instructed not to fail in purchasing it and they were prohibited from trading in it on their own account.[39] These instructions acquire added significance when compared with those on the ordinary varieties. For in the same letter the Court complained of the declining profitability of the Kasimbazar silk and pressed the factory to reduce its cost price.[40] In the early 1730s the demand for Bengal silk was generally good in London, and though the price fluctuated in the short-term, it

was such a staple commodity that the Company was always assured of getting a handsome profit at the auction sales. The freight charges on raw silk worked out at only 8d per lb, and other overheads, the duty and the cash discount of 6.5 per cent, marginally added to the total costs. Therefore the level of prime cost paid in India was of critical importance in maintaining the profitability of the article.[41]

Supply conditions in Bengal and European purchasing-methods

From the middle of the seventeenth century with the establishment of the Company's permanent factories in Bengal, one of the standing pre-occupations of the factors was to investigate the ways of silk buying in the main centres of production. The economic considerations of the trade, the timing and the size of the racolta, the winding techniques and the marketing methods were all recorded carefully. The European tradition of silk purchases in Bengal differed radically from the methods followed in the Levant or in China. In neither of the two supply regions did the European merchants have direct access to the silk producers in the interior. When the trading companies bought silk in Persia, it was obtained through the agents of the shah or officially approved dealers. The silk market of Aleppo was of course an intermediate one and traditionally dominated by wealthy Levantine merchants. In Canton raw silk sent from the plantations in eastern China was sold to the Europeans by the members of the Hong, who either held stocks themselves previously contracted for or bought up silk as it arrived in town in small quantities.[42] Beyond the selection of the right kind of thread and bargaining for favourable prices, the China supercargoes had little else to do in making their raw silk investments. As silk was a marginal article in the East India Company's China voyages before 1752, the system of buying in the spot market at the port of shipment made little difference and the supercargoes' price elasticity of demand remained high only within a narrow band of upper and lower limits. The position of Bengal raw silk was strikingly different. The Company's outward letters repeatedly refer to it as one of the most valuable items in the overall trade, a rich commodity whose low bulk made it possible to reduce transport costs across a wide range of trading products shipped from Bengal. In order to ensure even quality, steady deliveries, and a certain measure of control over prices, the Company's officials considered it essential to exercise some supervision over the method of procurement. The proximity of Kasimbazar to Hugli and Calcutta and the easy journey by river was a fortunate coincidence for the European silk purchasers. For the commercial policy of both the Dutch and the English Companies in India was to avoid, if possible, having to buy a key article from middlemen at the port of shipment. Access to the main producing area was no problem

in the case of Bengal raw silk, and the transfer of the provincial capital to Murshidabad, to which Kasimbazar was a suburb, in the first decade of the eighteenth century meant that the local factory could serve a double purpose. It could organise the details of the silk supplies and at the same time keep an eye on the political development at the nawab's durbar.

The existence of an active interregional trade in Bengal raw silk within India and a highly developed network linking the specialist dealers, the owners of mulberry plantations, and the winders in Kasimbazar made it easy for the European Companies to set up their own organisation. By the same token, they encountered considerable competition from the indigenous buyers of silk. The largest Indian exporters in north Bengal were the Gujarati merchants whose operations acted as a general indicator of the market trends. Next in importance were the Pathans and Central Asian dealers. How far Bengal silk exactly travelled before it was made into finished fabrics is something of a mystery, though Tavernier in his description of Kasimbazar mentions that the greater part of it was sent to Surat and Ahmedabad.[43] He also estimated the total production of silk in the area at 22000 bales, each bale weighing 100 lb of 16 oz per lb. The Dutch exports to Japan and Holland he put at 6000-7000 bales annually and he believed that they would have exported more had it not been for the opposition of the indigenous merchants. Tavernier's calculations were clearly based on guesswork and greatly exaggerated the total output. At the time of his visit to Bengal the Dutch were just beginning to expand their purchase of Bengal silk and their exports certainly could not have been in excess of half a million pounds. But he was right in drawing attention to the element of friction between the principal European buyer and the Indian traders anxious to protect the market from the effects of an excess demand. References to keen competition in the silk trade were particularly frequent during the second half of the seventeenth century. In John Kenn's report of 1661 on the internal trade of Bengal, the role of Kasimbazar as the premier banking centre of the province appears unambiguously linked to the fortune of the silk market. For we are told that 'according as this silk sells in Agra, so the price of silk in Kasimbazar riseth or falleth. The exchange of money from Kasimbazar to Patna and Agra riseth and falleth as the said silk findeth a vent in Patna or Agra.'[44] The connection between the rates of exchange for transfer of money and the price of silk, according to this reasoning, was an inverse one in the selling markets, though it was in the same direction in Kasimbazar itself. The dependence of the money market on the commercial prospects of a single commodity may indicate an unduly narrow area of activity, but it must be remembered that the banking functions of the commercial community of Kasimbazar probably post-dated the rise of the silk trade.

The district of Murshidabad was not the only one in Bengal to produce raw silk. Silk rearing was also practised in the area around the northern town of Rangpur, and Malda was an important centre of transit supplies. An inferior variety of silk came from Kumarkhali in the Nadia district, and Assam produced a certain amount of wild silk. In the early years of their trade, European demand remained confined to the Kasimbazar types, and it was only in the 1730s that the English Company began to try out the Rangpur and Nadia silks.[45] Besides the strength of demand from the Western buyers and the Gujarati merchants, the two most important elements on the supply side influencing prices were the size of the racoltas and the quality of the cocoons in individual seasons. One of the characteristics of silk production in Bengal was the existence of three separate racoltas in one year, the Indian term for the harvests being *band*. European observers were at some pains to point out that the best silk came from the November band. Next in quality were the March gatherings, while those of June and July produced only coarse silk. The first two racoltas yielded two-thirds of the annual output, and the filaments did not lose their softness and natural yellow colour when kept in storage.[46] The reason for the superiority of the November band lay in the fact that this was the season when the mulberry trees had the softest leaves and provided ample food to the silk worm. By February the weather was becoming warmer and the leaves harder, and the frequent rains in June and July reduced the number of cocoons. If this was the normal rhythm of silk production, unusual weather such as droughts accompanied by excessive heat or prolonged periods of heavy showers of rain could reduce total output seriously. Rising prices in 1727 was attributed by the Kasimbazar Factory to a scarcity of silk caused by extensive flooding of the district during 1725-6.[47] When the Company protested that the raw silk sent home was of uneven quality as well as expensive, some of the skeins being more like packthread than silk and full of knobs, it was replied from Bengal, 'The unusual heavy rains that happened that season, which drowned the country, destroyed the mulberry trees and worms, in so much that hardly one-third part of the wonted quantity of silk was produced . . . the small quantity that was saved must consequently be much coarser and harsher than in another season when the worms have the proper food.'[48] The silk merchants were almost ruined by the disaster and attempted to pass off inferior silk concealed among the good skeins. To have cut down the whole silk investment, the Calcutta Council considered, would have involved the Company in much greater financial loss.

With so much expertise involved, buying silk in north Bengal could be a hazardous business. European companies had the choice of contracting either with the big merchants of Kasimbazar or approaching

smaller operators, a special class of brokers known as *pikars*, who advanced money to the silk rearers and collected the material in small lots. The number of different groups present in the market and the keen competition among them made it unsafe to rely on spot transactions, and forward contracting just before the main racolta was gathered appeared as the surest way of securing an adequate supply of silk. Even so considerable uncertainties remained. As it was pointed out in the long discourse on raw silk appended to Alexander Hume's Memorie of 1730, 'The greatest difficulty in such dealings is in judging what quantity of good silk the Pattiny *[or pattani unspun filament]* will give, and there is no ways of knowing it, but either by a long experience or spinning some of it.'[49] The pikars generally knew a little about the methods of reeling, but their judgement was not to be trusted to, especially if they had any raw silk to sell. The English broker, the report went on to say, supervised all the business of the Company in Kasimbazar including that of raw silk, and the Dutch also employed a broker to conduct their silk buying. Advance contracts were distributed among a number of silk merchants who obtained the silk directly from the suppliers and employed spinners in their own houses. But the Dutch Agent bought unspun filament or pattani silk from the pikars and had it wound in the factory. In Hume's view this was much the best method for getting the silk prepared, as the spinners could be kept under constant watch. The Ostend Company's servants were apparently well informed about the methods followed by the English East India Company in securing its raw silk except for one small detail. The Council always arranged to meet the leading merchants directly at the factory and the details of the contracts were entered into the official proceedings, even though the negotiations and the subsequent dealings were conducted through the broker.

As with other commodities imported by the Company, the instructions on the purchase of raw silk began at the apex of the organisational pyramid. The Committee of Correspondence each year specified the quantity required in the list of investment, which reached the Kasimbazar Factory fifteen months later having passed through the Calcutta Council earlier. Demand conditions in Europe and possible price fluctuations at the supply end determined the limits within which the servants had the discretion to vary the relative quantities of the different types of silk. For example, the orders for November 1734 specified 400 bales of Kasimbazar *tani* silk of the November band, 200 bales of Kumarkhali silk, and 150 bales of the expensive Gujarat silk. But if the tani silk of Kasimbazar was available at under Rs 5 per seer of 30 oz, the quantity could be increased to 800-1000 bales.[50] The total cost of the silk investment was valued by the Committee at £64300. The actual contracts given to the silk merchants laid down the delivery

date and the amounts of each grade of silk to be included in a particular variety. After the silk had been delivered in the spun form, it was inspected for any deviation from the sample quality and the final price paid to the contractors was only a proportion of the original agreed rate, as a discount known as dasturi and reductions for unevenness in thread were payable by the merchants.[51]

The silk market of northern Bengal was a highly competitive one. Even when the East India Company had become a substantial customer for Bengal silk in the 1720s and 1730s the English officials continued to emphasise their inability to control the market. Prices rose or fell according to the general level of demand.[52] The crop failure of 1726 induced the Calcutta Council hurriedly to enter into contracts with the merchants, as the prices were going up rapidly under the influence of 'extraordinary demands' made by the Gujarati buyers.[53] In less hectic times the Company could afford to wait longer and see what kind of investments the others were making. Though the products bought by the Gujaratis did not directly compete with those shipped to Europe, prices were sensitive to general movements in the market.[54] As the buying season opened in January and continued to March, there was an element of speculation about the probable future course of prices. In March 1731 the Kasimbazar Factory advised Calcutta that the November racolta had been very good. But very little of it was being offered for sale and most of the supplies were in the hands of a few dealers who had bought up stocks in the expectation of the prices rising. The Punjabi merchants had bought silk worth Rs 300000, though the Gujaratis were waiting in the hope of the prices coming down when the March band silk was harvested. The Dutch had publicly declared that they would never buy at the prevailing prices, but their broker had been secretly active in the market and bundles of silk were seen to be carried into their factory.[55] The cards were not always stacked in favour of the suppliers. Merchants who had entered into definite contracts to deliver certain kinds of silk were liable to heavy losses if the racolta turned out to be short on particular grades and prices went up during the trading season. The same thing could happen to speculators with large stocks of silk in a falling market. From the Company's point of view the most obvious problem was to distinguish between a genuine rise in silk prices through increased demand or other causes and prices artificially inflated by dishonest servants in Kasimbazar. The frauds committed by the notorious Hugh Barker in 1736 in the silk investments were the most public example of a practice that was never very far from the Company's affairs in India.[56]

In spite of the many deductions made on delivery, the contract price for silk was an object of intense bargaining between the merchants and the European trading companies. Contracts made early in the season

tended to set the prices for the remaining period, as these were used as guidelines on both sides of the market. Whether prices would break in the middle of the trading season depended on the response of the Gujarati merchants to late buying and the size of the March band silk. Combinations were frequent. In 1740 the Bengal Public Consultations recorded the Council's appreciation of Hattoo Cotma, the Kasimbazar merchant, who had been of 'great service as curb on the broker and merchants'. When the latter refused to lower their contract prices and formed a ring, Hattoo Cotma reduced his price and broke through the combination.[57] The practice of forward agreements caused endless confusion, as the contracts were based on the understanding that the quality of the silk shown in the samples by buyers would be maintained on delivery. Merchants were likely to form rings if they had made losses on their contracts in the previous year. In January 1742 the Kasimbazar Consultations mention that the Council had inspected the samples of the November band silk but they did not think that contracts could be made on these as they were much inferior to the previous year's samples. When the merchants were informed of this, they replied, 'if we thought to get any people of substance to contract on such musters as last year's we should find ourselves mistaken, that if we would be at the pains of making a strict inquiry we should find those musters were not fair ones; that those who did contract on that muster were under a necessity for so doing as they had bought up great quantities of Putney for which they could have no vend but to us by reason the Guzeratters and Hyderbaders had got what they wanted and none but us and them bought that fine sort.'[58] Although the English Company generally dismissed such reasons as mere stereotyped excuses, on this occasion the Chief of the factory, Sir Francis Russel, and other members of the Council did not think that the arguments of the merchants were unreasonable. The excessive fineness of the silk in the samples, they were convinced, was responsible for short deliveries in 1740-1. As the market was rising currently, the only consequence of holding on to the old samples would be an unacceptable increase in the contract prices. Even then 'we could not be sure of having it like the muster or anything near the proper proportions'.[59] If these examples prove anything, it is to show that flexibility and the ability to make rapid assessment of the market trends were vital to the success in silk buying. A rigid policy and standard rules, such as were adopted in the case of the textile investment, were not suitable for raw silk. As Jan Kersseboom, the Dutch Chief, wrote in 1755, the silk would remain expensive in Kasimbazar not only because of high food prices and excise duties but also because 'the demands of the European nations still surpass the quantity which the country is capable of exporting'.[60]

i6

COFFEE

General trends and fluctuations in imports: the interaction in supply and demand

Three centuries ago the southern Yemen and small areas of Ethiopia were the only places in the world which supplied the Middle East and Europe with coffee. With the arrival of the Dutch and the English at the port of Mokha and in the Red Sea area generally the coffee trade of the Yemen was to undergo dramatic changes. The tribal rulers of the region were always jealous of any attempts made by foreigners to export seeds and seedlings of the coffee tree and there were stringent regulations against any such attempt, as the servants of the English East India Company often testified.[1] But as the coffee-drinking habit rapidly spread in Europe and other parts of the world during the seventeenth and eighteenth centuries with the consequent rise in demand, the monopoly enjoyed by the coffee growing areas of the Red Sea was to be broken for ever, and its cultivation extended to Ceylon, Java, the Caribbean and South America.[2] Another unlooked-for consequence was the greater availability of documentation on the volume and structure of trade, which the purely Islamic sources of the time seem to lack. The descriptions left behind by European travellers and merchants, and the records of the English and Dutch East India Companies provide not only vivid accounts of the trading conditions at Mokha and Beit el-Fakih, the chief centres of coffee trade, but also detailed information on the exports of various nations, prices, methods of purchase, commercial regulations, the areas of coffee growth and system of cultivation, and finally the economics of marketing. There can be little doubt that coffee had partially taken the place previously occupied by pepper and spices in the Levant trade and brought a new source of prosperity to regions that had few alternative sources of wealth. As an earner of currency, coffee together with Anatolian wheat and the raw silk of Persia had a vital part to play in the flow of silver specie in its eastward journey from the mines of Mexico and Peru via the royal mint of Seville to the trading ports of Asia.

The existence of coffee as a plant and a beverage became known in Europe towards the end of the sixteenth century, although coffee was drunk in the Islamic world for nearly a century before. Jean de La

Roque, who wrote the first scholarly historical treatise on the origins of coffee both in the Near East and Europe, attributed its first botanical reference to Prosper Alpinus, a physician of Padua, whose book was published in Venice in 1592.[3] The work of Alpinus went through several editions in the seventeenth century and was followed by other learned works, the most notable being the treatises of Philip-Sylvester Dufour, Nicholas de Blegny and John Ray.[4] The interest aroused by Arabian coffee among the scientific world of Europe was equalled by the attention paid to it by merchants anxious to exploit its economic and commercial prospects. But it was not until the middle of the century that coffee appears to have been regularly imported into Europe through the Cape route. The Venetians of course were long familiar with coffee as a trading product and had brought it to Italy from the Mediterranean ports of the Levant.[5] From the commercial and economic point of view the importance of coffee for the East India Company during the century under review sprang from its cost-reducing function as a ballast good and the high margin of profits in years of brisk demand. As wholesale importers the Company of course was not directly interested in the internal distribution. Coffee was put up for sale at one or more of the quarterly auctions of the Company's goods and purchased by dealers who either distributed it in the home market or exported it to the Continent. What was of importance to both the dealers and the committee responsible for organising the sales was the timing of the operation and the actual quantities offered to the public, because these were the two factors which vitally affected all calculations on the profitability of the commodity.

A great deal can be learnt about the changing pattern of consumption and demand for coffee from an analysis of the annual figures of imports, sales, and price movements which the Company's account books provide in full abundance. There was certainly a statistically significant relationship between the quantities bought by the Company and prices, though the coefficient of elasticity is positive, indicating that at times of high prices the amounts demanded were also high (see Table B.3.2, Appendix 3, p. 499). The coefficient of time trend shows that during 1710-45 the function shifted upwards by about 3 per cent a year. It is clear from the import figures that in the early Restoration years the Company's demand for coffee rapidly increased. In 1664 the quantity was 401 cwt (20390 kg) which reached 1101 cwt (55984 kg) in 1672. In 1669-70 the order for coffee was 200 bales and by the next shipping season the Correspondence Committee had increased it to 500 bales.[6] But the main emphasis in these early instructions was on the need to purchase the right quality of coffee and on transporting it in such a way during the eight-month sea-voyage as to preserve its colour and freshness.[7] The ratio of the cost to selling price, which was excep-

tionally high in the 1660s and far exceeded the margin of gross profits on other imports, began to decline in the 1670s perhaps as a direct result of the large volume of imports, and in 1674 it was only 1:1.44 as compared to 116.35 in 1665. The excess supply retarded the sales and was no doubt the reason why the Court cancelled in this year the previous order for 200 bales and prohibited altogether any further purchase of coffee unless it could be bought at a very low price and even then not in excess of 50 bales.[8]

If this was the first indication of the relative instability of the market, other examples were to confirm it during the remaining years of the seventeenth century. The very low imports of 1675-6 were followed by a gradual recovery until a peak was reached in 1684 with the total figure standing at 2571 cwt (130730 kg). The next two years recorded a fall, but the decade ended with the volume of imports at a level which was not exceeded again until the beginning of the next century. The price of coffee was very high in 1686 making it one of the most profitable bulk goods imported from the Indies.[9] At the same time the Company constantly expressed concern that the cost price of coffee, always sensitive to the level of demand, should not get out of balance in relation to the selling prices obtaining in Europe.[10] The absence of any imports in 1691 and 1693 and the very small quantity in 1692 was the result of the disruption of the Red Sea trade caused by the depredations of European pirates in the area. By the mid-1690s it was apparent to the Company that coffee had become an article of common use in the home market and would always be in a position to yield some revenue if the market was not oversupplied. As a bulky commodity it had a special role to play in the economics of the Company's shipping and it could effect important savings both in terms of utilising shipping space and preventing the ships from being ballasted with stones on which half freight had to be paid.[11]

In the opening years of the eighteenth century the East India Company's coffee trade appears to have received a fresh impetus. As the Surat Factory, after suffering yet another blow from the consequences of renewed piracies in the Red Sea, gradually limped its way back to normal trading relations with the Mughal government, the imports of coffee from Mokha began to rise strongly and by 1711 had reached nearly 5000 cwt (254240 kg). In less than ten years these figures nearly doubled. The record imports for the period were registered in 1724 with 23852 cwt (1212826 kg). In the previous century the relative share of coffee in the total value of the Company's imports seldom exceeded 2 per cent, though in exceptional years such as 1688 and 1690 it was as much as 6 and 8 per cent, respectively. In the second and third decades of the eighteenth century this share was more than 10 per cent on an average and in 1724 it was no less than 21 per cent. From 1730 onwards

the relative share fell below 10 per cent and generally varied between 5 and 7 per cent. The absolute figures of imports also declined in these years. In the decade from 1730 to 1740 these averaged 9000 cwt (457632 kg), increasing slightly during the next two. It is evident that in the last thirty years of our period the Company's coffee trade had reached a state of comparative stability.

The long-term trends in the import of the Yemen coffee, while indicating its strong position in the Company's trade as a whole, do not tell us much about the short-period changes in demand and market conditions. With the disappearance of the sales records the mark-up on the cost price, an useful index of profitability, can no longer be constructed. Yet there is ample qualitative evidence to show that the ratio of cost to sales price did frequently change, shifting in the process the absolute and relative position of coffee in the Company's preference scale. Between 1698 and 1706, the year in which the practice of recording the sale of coffee in the central account books was discontinued, the price was higher than in any previous period. The underlying strength of the market is revealed in both the English and Dutch sources. The Dutch Company had begun to increase its orders after a set-back in 1699, the total quantities increasing from 200000-250000 Dutch lb in 1703 to 600000-700000 in 1711.[12] In a letter written in the spring of 1708 the English Company informed the Bombay Council that coffee was continuing to be in great demand and was likely to keep up its price. The preceding season's imports had sold at £25 per cwt and the Company saw little probability of the European markets being fully supplied and much less overstocked in the near future, because the Turks had been obstructing the export of coffee to Christendom. Bombay was urged to return as much coffee as it possibly could without raising its price and even to conclude forward contracts with the owners of ships sailing to Mokha from Surat for the delivery of coffee on their return.[13] The market remained buoyant for the next few years. In 1711 coffee fetched a good price, while we learn from another letter dated 1712 that the Company was anxious to fill up the surplus tonnage of its ships returning from western India with coffee in anticipation of the current high price continuing.[14] Coffee was even preferred to Surat textiles, and according to one estimate made by the Court in 1717 the market could easily absorb 400-500 tons a year.[15]

However, the wide margin of profits was not something that could be maintained indefinitely. The scarcity of coffee in the early years of the eighteenth century and the consequent high price in London was probably caused by a combination of two factors, the Continental wars and an upward shift in the demand curve as a result of a change in consumer taste. But in 1719 the Company was impelled to point out to the supercargoes who were shortly to sail for Mokha that the coffee brought home

hip *Anne* was so highly priced in the invoice that the Court would not have ordered any more coffee except 'in hopes of better times'. The prime cost of the ship's cargo of coffee was £32690 which produced a net revenue of £38462 after deducting freight and customs charges. The balance was considered to be insufficient to pay for insurance and interest on capital.[16] That this was the standard method followed by the Company in calculating the profitability of coffee and the different components of costs is indicated by another memorandum prepared at a much later date.[17] The calculations of 1736, summarised in Table A. 15, were much more comprehensive than those of 1719, and

Table A. 15. ***The sale of coffee received by the*** **Brittannia** ***1736***

To customs	£ 11506	By 3602 bales sold for	
Freight	£"085		£80949
5% duty	£ 4047	Discount	£ 5261
Warehouseroom	£ 2023		
5% commission on £47024 (stock sent out)	£ 2351	Total	£75687
Total*	£31014		
Net produce	£44673		
Total balance	£75687		
Cost of coffee	$151236		
at 5s	£37809		

Source. Memoranda of the Committee of Correspondence, vol. io 1 [the volume is unpaginated].
Note. *The figures are rounded up.

it can be seen that apart from prime cost the most substantial other items were freight and taxation. Even at this time, however, the rate of profits on coffee sales was quite substantial. As the value of imports rose from 1718, greater refinements were effected in the timing and method of sale. The timing of the coffee ships was arranged in such a way as to make it possible to reserve the bulk of the supplies for the March sale in London.[18] This practice not only introduced a critical element of seasonality into the time schedules of shipping but also created delicate financial problems for the Company and its dealers alike. In 1722, for example, two ships arrived home from Mokha, the *Sunderland* and the *Aislabie.* The first ship was on time for the March sale, but the cargo of the latter had to be warehoused until September (as the ship arrived on 24 April), which meant not only that coffee was less fresh and therefore less likely to fetch a good price but also additional storage charge and interest costs because of loss of time in sales.[19] If it is less than clear from

this example why the Company should have been tied to these time intervals in selling its coffee, an answer is provided by a case recorded in the Court Minutes of 1733. It seems that the Company as a means of inducing the dealers to offer a high price at the auctions gave definite undertakings not to sell coffee before specified dates. On this occasion when the Court announced its decision to sell coffee on 19 June several of the buyers approached the Company and requested that the sale should be postponed for three weeks longer. The request was turned down and it was decided to go ahead with the sale as originally planned, but a week later further notice was given that the Company 'will sell no more coffee than what will be put at this sale till March next, except only coffee in Private Trade'.[20]

Obviously these measures were intended to reduce uncertainties and make the market more predictable, just as the Company attempted to regulate its own supplies from Mokha. As coffee was no longer a marginal product for the Company and the increased volume of imports had raised the limits of financial risks, information and regularity were the two indispensable institutional aids to decision-making and ultimately clearing the market. In common with most semi-perishable commodities, the market for coffee was likely to have been fairly narrow, and it was no easy task to equate supplies to the level of demand in a precise fashion. The detailed instructions given to the supercargoes and the servants resident in Mokha, the carefully worded alternative choices, betray only too frequently the difficulties which must have confronted the Court of Directors in measuring up the course of future demand. How exactly this was achieved must remain speculative. A weighted average of selling prices for a number of years deflated by a similar index of cost prices and some sort of discounted cash-flow method was most probably used to monitor the existing state of demand and to predict the future.[21] But what we do know for certain is that even in the eighteenth century short-period imbalances between the supply and demand could arise in the European market for coffee, while the long-term trend for the supplies as a whole was expansionary as a result of bringing new areas into cultivation. There are many references to periodical changes in the market in the Company's outward letters and other records which cast some light on the relative slowing down of the coffee imports in the 1730s. In 1726 the Bombay Council noted in a letter written to the Mokha factory that large quantities of coffee had been imported into Europe during the previous few years and the Council speculated whether the attendant effect of depressed prices together with the high cost price paid in the Yemen would induce the Company at home to restrict supplies.[22] A political revolution in the Yemen was responsible for the very small imports of 1728, but by this time the Company was seriously worried by the increase in coffee culti-

vation which had taken place in Java and was seeking ways of reducing the cost price of Yemen coffee.[23] The downward drift in prices seems to have continued during the next ten years. A letter from 1735 complains that the price of coffee was so low in Europe that it had turned 'but to a very indifferent account'. The decline in profitability is ascribed to the high price given for it in the Red Sea and to the large supplies brought in by the Dutch and the French from their own overseas settlements, as well as an increase in the quantities imported from Barbados and Jamaica.[24] Faced by a sudden enlargement of the sources of supplies, the reaction of the Court of Directors predictably enough was to impose price limits within which the servants were to confine their purchases.[25]

In 1737 the instructions given to the Mokha supercargoes re-emphasised the need for a reduction in costs and left no room for doubt why this had become necessary. 'You must take the properest and wisest measures to purchase our Coffee on the cheapest Terms possible, which of late years has been but a dull Commodity in Europe, occasioned by the excessive large Imports of the Dutch from Java, the French also bring some from the island of Bourbon, and our Plantations in the West Indies are likewise fallen into the method of raising it, these things being considered it will require your utmost care and prudence in providing Coffee to make it turn to a Profitable Account.'[26] In the absence of statistical information, it is difficult to establish what was the precise extent of the fall in the profit margin. The volume of imports in the decade between 1740 and 1750, in spite of the general sluggishness of the market, was not markedly different from the previous years. In contrast the 1750s recorded more irregularities in the supplies, though the annual quantities were slightly greater. In 1754 there was no order for coffee as there was a sufficient quantity of stocks, and two years later the Court of Directors decided not to send its annual ship to Mokha that season as the imports were still large enough to satisfy demand for twelve months.[27] These examples - admittedly of a fragmentary kind - bring to light the characteristic features of the commodity market in which variations in costs, selling price, and the level of inventory determine the volume of trade. Unlike most other imports of the East India Company, the Yemen coffee was competing with the products of newly producing areas in the eighteenth century which had the consequence of making the price elasticity of demand high for the coffee of any one particular area.[28] The figures taken from the Customs House records, imperfect as they are, demonstrate that until about 1730 Mokha coffee formed a high proportion of the total quantities imported into Britain. It was probably not till after 1750 that the tide began to turn decisively against the Red Sea imports, throwing into shade all previous records of the Company.[29]

The organisation and the system of buying

The East India Company's factory in the Red Sea was under the formal administrative control of the Surat and later Bombay Council, but the organisation of coffee purchase had its own peculiarities, giving rise to a dual system which was never properly integrated into the hierarchical framework created by the Company in its Indian trade. As the coffee trade gained in importance, the Court of Committees adopted the practice of sending a ship to Mokha directly from England every year. The chief merchants, the supercargoes, who sailed in these ships carried a separate commission from the Company about their duties and responsibilities, but their exact position in relation to the authority of the Bombay Council always remained vague. Perhaps by itself this practice would not have created any problems except for the fact that the Bombay Council often sent their own agents to Mokha with instruction to buy supplementary coffee, which was re-exported from India on board the ships under Bombay's own control. A situation of potential conflict could also arise from the complicated sailing directions given to the Mokha ships, which required them to take in part of their ladings at Bombay. Lastly the Chief of the Mokha Factory, when a permanent establishment was kept there, owed responsibility to the Bombay President as his nominee. The latter had reason to resent the independence given to the supercargoes.

But the pattern of trade before the emergence of the direct voyages and the supercargo system was different from that of the later period. In the early years of the coffee trade, when the Company's purchases remained small, it was found economic to buy most of it from the Surat merchants. In 1661 coffee was supplied from the short-lived factory at Mokha as well as from Surat.[30] After its closure in 1663 only sporadic attempts were made to secure coffee in Mokha itself and most of them ended in failure.[31] From 1670 until almost the end of the century the ports of southern Arabia remained out of bounds to the Company's servants in Bombay and Surat. The reason for this inaction lies in the Company's reluctance to commit its capital in too many subsidiary ventures rather than in any inherent political or commercial obstacles at Mokha. It must be said that the commercial resources of Surat in these years, probably the most prosperous ones during its Mughal history, were more than adequate in meeting the requirements of the European Companies.[32] Although the export of Yemen coffee to India was not large compared with the exports to the Ottoman Empire, even so the quantities bought by the English Company were only a small proportion of the total amount available in town.[33] The problem was not so much the difficulty in securing a supply, as its general irregularities and the speculative nature of the market. In the usual manner of commodities

whose supply is seasonal, the price of coffee rose and fell according to the harvest in the Yemen and the number of buyers in the market.[34] In Surat the fluctuations in prices were governed by the arrival of the Red Sea fleet and the distribution of coffee among the various traders. In a letter written in November 1670 Aungier lamented that the price of coffee had risen and fallen strangely during the last four months. Before the Mokha ships came into port it was Rs 22 per maund, but on the arrival of fresh supplies the price fell precipitately to Rs 10-11 and had steadied to Rs 12—13 since then.[35] Of course one way of avoiding such uncertainties was to contract in advance either at a fixed price or by paying a small commission to the merchants who then undertook to supply the amount ordered at the prevailing market price in Mokha.[36] While this method had the advantage of not being dependent on the spot market in Surat, it involved long planning ahead and was inflexible to the changes in the instructions received from home. Advance contracting for coffee was infrequently used in Surat.

Coffee prices also varied in Surat according to the demand from the main consuming areas in the Middle East, as it regulated the quantities which the Indian merchants found profitable to bring back to Surat. With better knowledge of the intricacies of the coffee trade in the Red Sea, the Company's officials noted with wonder the vast amounts sent to Alexandria, Basra and Persia, and the effect of this varying demand on the price.[37] In 1672 when the Surat ships returned from Mokha the price of coffee was found to have been particularly dear (45 Spanish dollars per bahar) 'by reason of the great quantities . . . transported thence to Bussora and other parts of Turkey'. At this price there was little inducement to the Surat merchants to import it, and, out of the total estimated amount of 3300 maunds (60000 kg) brought back, no less than 2000 were in the hands of a single seller. But the merchant refused to take advantage of the prevailing scarcity and after fifteen days of negotiations over the price the Factory bought the entire amount at Rs 11.22 per maund. The Surat Council thought that at this selling price he was left with very little profit.[38] The indirect purchases of coffee continued in Surat until the final years of the seventeenth century. In 1682 for the first time the Company sent a ship directly to the Red Sea from England.[39] The Court of Committees preferred the method of trading from aboard the ships with travelling merchants to the establishment of a new factory at Mokha. Trading posts were not only very expensive to maintain, but in the case of coffee there was a special reason for keeping the Mokha ships separate from those calling at Bombay. The Company's ships going to western India were obliged by the terms of their charter-party to bring back a certain quantity of pepper as ballast, and coffee shipped with pepper or any other goods with strong odours inevitably fetched a lower price in the auction sales at

home:[40] In 1729 it was said that the coffee which came in Bombay's pepper ships sold at a price 8-10 per cent lower than the coffee exported directly from Mokha.[41] If the Surat Council was really apprehensive in the 1690s that the supercargo system might pose a challenge to their authority in freely ordering the Company's commercial affairs on the western seaboard of India and in the Near East, it was to be given a respite until 1703 when the ship *Donegal* was chartered by the Company for a voyage to the Red Sea.

Once initiated the practice continued with few interruptions until the end of our period. It was an expensive system of trade, since the Company paid high rates of commission to the supercargoes, and in 1715 the Court of Directors informed the members of the Bombay Council to soothe their ruffled feelings that the Company would be less ready to send out ships from London to Mokha directly if they were certain of receiving sufficient annual supplies of coffee from Bombay. The President and Council, it was suggested, could improve matters by despatching a ship from Bombay to buy up coffee at Mokha or even by continuing the existing custom of buying it from the Surat merchants who certainly had the advantage of religion over the Company's own agents.[42] Bombay indeed kept a special vessel, the *Blenheim*, which regularly traded to Mokha at this time, and the Council carried out in 1713 a cost-benefit analysis between this method of procuring coffee and keeping a factory at Mokha.[43] The decision to set up a factory at Mokha (1715) was undoubtedly taken in the light of what the Bombay Council considered to be a threat to its sphere of influence, but it was justified by repeated pleas to the Court that Bombay could procure coffee at a cost 10 per cent lower than what the supercargoes paid.[44] The continuation of the dual system of trade at Mokha may be attributed, apart from the technical problem of preserving coffee from contamination by other bulk goods, to the Court's distrust of their servants in western India. The Red Sea and the Persian Gulf were areas in which the members of the Bombay Council from the President downward had great vested interest in the form of private trade, in which, thanks to the merchants of Surat, they encountered fierce competition. From the Court's point of view the western Presidency of India was of declining importance in the eighteenth century; but the trade of Mokha was different. Coffee was a rising commodity and a major source of revenue from sales. If Bombay was put in sole charge of its supply, coffee could easily go the way pepper had done, with the servants buying up pepper privately and reselling to the Company at an inflated price. This could happen even with coffee, as an incident in 1726 well illustrates. A file of documents in the Company's Mokha Factory Records marked 'A Relation of the Manner of Mr. Cowan's Abusing the Company in their Investment of coffee at Mocho in the year 1726' bring to the surface a

curious operation in which Robert Cowan, the Chief of the Mokha Factory, was deeply involved. Early in the season in 1726 when the price of coffee was low in Beit el-Fakih he had invested a considerable amount of his own money in buying coffee privately, which was then packed in unmarked bales and secretly sent down to Mokha. When the Company's ships arrived in port, Cowan's coffee was shipped off with the rest but reinvoiced at a price much higher than that which had actually been paid. While Cowan was buying coffee for himself, very little was purchased on the Company's account because of an alleged shortage of cash. 'It is something strange,' the accusing document states, 'that the Honourable Company's credit should be at so low an ebb that they could not gain credit for a few thousand dollars when their servant, only by the reputation of being their servant could have what sums he wanted.'[45]

Fraudulent transactions such as this were by no means exceptional. When the Mokha Factory was closed by order of the Company in 1726, Cowan and his associates replied that the settlement could have been made profitable if the previous factors did not embezzle the Company's cash and use it for their own purpose, and they claimed virtuously not to have built up private fortunes as the others had done.[46] The Bombay Council did not fully grasp that it was immaterial to the Court of Directors who actually committed the frauds, since no one could be wholly trusted, and they went on demanding that the coffee trade should be solely entrusted to Bombay.[47] The withdrawal of the Mokha Factory coincided with a political crisis in the Yemen, and it was not until 1728 that Francis Dickinson returned to Mokha with the title of 'Commissary' to renegotiate the terms on which the Company was to resume its trade there. By this time Bombay had given up all thoughts of keeping a factory the year round at Mokha. Instead a senior servant with experience of trade in the Red Sea was sent during the season to supervise the purchase of coffee, while in the slack months from October to March a Hindu bannian was employed to act as a broker.[48] Carsten Niebuhr during his travels in Arabia a quarter of a century later found essentially the same system at work, though he added that the East India Company now sent only one ship in every two years to Mokha for coffee.[49] He also mentions the practice that had continued since the early 1730s of renting annually houses both at Mokha and Beit el-Fakih which served as trading premises with the arrival of the supercargoes and the Bombay ships.

Commercial privileges and customs

One of the constant fears of the Company, repeated so often in the outward letters of the early eighteenth century, was the treatment its Christian servants might meet at the hands of fanatical Islamic rulers of the Red Sea. The impression, while true of some areas, was not borne out by actual experience in so far as the Yemen was concerned. In 1719 a letter written from Mokha categorically stated that a Christian if he behaved himself was no more in danger there than he was in Europe.[50] In fact what the European merchants came to dislike in southern Arabia was not so much any signs of religious prejudice as the arbitrary powers and exactions of the imam or his representatives in which they were common sufferers with the indigenous inhabitants and other foreign merchants. But at the same time the disputes between the governors of Mokha and the Europeans arose in a large measure from the attempt of the trading companies to preserve to the letter the exceptional commercial privileges granted to them. For the customs duty levied on the Europeans came to only 3 per cent *ad valorem,* while the Muslim and Hindu merchants paid rates varying from 5 to 7.5 per cent.[51] Why did the rulers of the Yemen discriminate in favour of the Europeans ? A mixture of political and economic motives seem to have been at work. The superior sea-power of the Europeans enabled them to blockade the ports and strangle trade as well as inflict physical injuries on the coastal towns by bombarding them with the ships' guns. The kind of treatment the imam was accustomed to receive from European powers, including its long history, is exemplified by the demands made by a Portuguese war squadron in 1729 for half a million dollars as arrears of tribute since 1672. The Portuguese threatened to open fire on the port if the demands were refused.[52] While the political lesson of seriously challenging the existing rights of the Europeans was clear enough, it is less than evident why they should have been given these rights in the first place. Since the European demand for coffee was a new and growing factor in the economy of the region, it is possible that a preferential rate of duty on European exports was seen by the Yemeni rulers as a fiscal step likely to prove beneficial in the long run.[53] Also one must not overlook the tax paid by the sellers of coffee, the merchants and the growers, which to some extent compensated the revenue loss suffered by the government.

The incentive given to the export of coffee was perhaps most clearly underlined in the provision which allowed the East India Company to ship 600 bales of coffee free of duty. The French Company did not enjoy this privilege but instead paid a slightly lower rate than the English.[54] The commercial capitulations which have survived in the Company's records as translations also specify other conditions on which the Company was to trade at Mokha.[55] The most important of these was

the freedom to import and sell broadcloth and other goods including lead, a strategic war material, without any obstacles from the subordinate officials. The governor of Mokha likewise was to see that all commercial contracts entered into by the local merchants were honoured, and he was forbidden to impose any new duties on the English or compel the merchants from Surat who freighted their goods on board the Company's ships to pay the *verah* or the indigenous rate of duty. The treaty of 1729 contained a new provision, the liberty to export coffee through the port of Hodeida, in case there was a scarcity of camels at Beit el-Fakih, without having to pay extra dues. Had the Company's servants been content with these commercial terms alone, they would still have appeared as a very privileged group of traders. But difficulties between the Company and the governors of Mokha were likely to arise just as much from the latter's refusal to comply with the formal directives from Sana, the imam's capital, as from the policy pursued by the Company's servants in furthering their private trade.

It is a truism that customs are of use to a government as a source of revenue only so long as there is a sufficient volume of trade. The Company's officials in Bombay and Mokha were perfectly aware that the imam's income from customs depended mainly on the trade of the Surat merchants, and in 1724 when Surat was threatened with a blockade by Bombay's naval squadron the Mokha Council noted with dismay the unfavourable reaction it could provoke there. The Council wished that there would be no cause to interrupt the Red Sea trade.[56] However, the East India Company's own ambition to stake a claim in Surat's highly profitable trade with the Red Sea goes back to 1717, when hopes were expressed that the new settlement at Mokha might be made more profitable if the English could come in for a share of the trade 'hitherto ... engrossed by the Suratters'.[57] Two years later when the Court learnt that the Indian merchants paid customs at the rate of nine per cent while the Europeans paid only three, it seemed to them that with proper management the greater part of Surat's trade at Mokha could be diverted into English hands.[58] It remained for William Phipps, the Chief of the Mokha Factory, to point out in 1721 the full implication of the Court's proposed course of action. The government of Mokha received more revenue from one Surat ship than they did from three English ones. Therefore when they discovered the decline in the trade of the Surat merchants, the government would be certain to make the position of the English very hot indeed. As things stood the Europeans enjoyed greater privileges and were treated with more respect than any other nation in the Yemen. Their goods were seldom searched and the customs officials generally came to the factory to clear them, while the bales of the Indian merchants were not only narrowly searched but also flung about the customs house and often overvalued. Surprisingly Phipps

came to the conclusion that the Mokha Factory was of no great benefit to the Company, because the commercial terms given to them before were just as favourable without having to pay the now expensive presents expected by the local officials from the heads of the European factories. The way to make the factory more profitable, according to Phipps, was not by taking over the trade of the Surat merchants but by making the English private traders contribute to the cost of obtaining the privileges.[59]

Significantly the analysis of the political situation concluded with the observation that since the Europeans had settled in Mokha the local people were gradually infused with the idea that the Western nations reaped great financial advantage from this trade which occasioned 'yearly innovations which they believe we will rather bear than quit the Trade'. Already in this year the governor of Beit el-Fakih had imposed an additional duty of one dollar per bahar of coffee purchased by the Europeans, on top of the two dollars paid by the sellers. In Mokha very little coffee was brought to the market that season because the governor had increased the sales tax on European coffee to five dollars per bahar.[60] During the next few years complaints of arbitrary impositions rapidly increased. The trading affairs of Mokha were controlled by a court favourite, Kasim Turbatty. The vizier, his patron at Sana, transacted all business at 'their Barbarous Court' and no letters of complaint ever reached the imam.[61] By 1725 Robert Cowan, who had replaced Phipps, was advocating the use of force against Mokha. It could easily be bombarded from the sea and sacked by a company of regular troops.[62]

When the Company returned to the Yemen in 1728 after the brief interruption caused by the revolution and civil war there, the capitulations granted by the new imam reconfirmed all the old privileges. But once again these proved as ineffectual in preventing disputes arising between the Company's servants and the Mokha government. In 1729 the supercargoes of the *Barrington* reported that the governor of the port had insisted on the English paying the 'Moor's customs' of 7.5 per cent before they were allowed to ship off their coffee. On closer investigation into the reason for this action, the governor informed them that the imam had issued strict instruction that all importers of Surat goods, including the English, should pay the higher rate of duty. There is no doubt that the Bombay servants were now fully determined to put into effect the Court's vague hopes of 1717, for Francis Dickinson made a specific reference to that letter in order to justify his conduct against the governor of Mokha who 'like all old obstinate villains that when they have done any ill thing, maintain it'.[63] Dickinson attributed the governor's policy to the machinations of the great Surat merchant, Mulna Mahmud Ali. Along with other Surat merchants, Mahmud Ali stood to lose most from English encroachment on their trade.

But Imam El Mansur, struggling to consolidate his political power and greatly pressed for money, could not overlook either the decrease in the customs of Mokha. 'Most of the Disputes which has happened,' wrote the supercargoes of the *Houghton* in 1732, 'has been on account of the private trade from Surat, or at least it has been made the pretence.' The full inside story was given to them privately by the imam's shroff, Mahsnad Yawueen. The governor of Mokha, Fackee Hamad, had apparently represented to his master that the English were to be held responsible for the decline in the port's trade with Surat and the resultant shortfall in customs. This the imam could not allow to continue, and he had replied that the 3 per cent rate of duty granted to the Europeans was to encourage the export of coffee and did not apply to the import of goods from Surat. If the privilege turned out to be detrimental to his government, it should not go unchallenged. The English merchants should pay the same rate of duty as the Surat traders did on their Indian imports.[64] Disputes of this kind, when argued from uncompromising positions, can lead to only one outcome, an armed confrontation. That point was soon reached. In 1733 the governor put a stop to the English shipment of coffee unless they paid the full six years' customs on 600 bales annually exported free of duty.[65] During the next few years he also refused to settle his account with the European companies for goods purchased from them. In 1737 the reduced danger from Angria, with the blockade of his naval base, at last gave Bombay an opportunity to use its naval cruisers and the Council decided to call the government of Mokha to account.[66] At the same time the French Company had also resolved to take action and in February, before the English fleet reached Mokha, DelaGarde-Jazier's squadron bombarded the town from sea.[67] Thirty years later Niebuhr found that the people of Mokha still recalled the year in which their governor was pursued by 'pots of fire' wherever he went. By this time, as Niebuhr recorded, the English private traders from Bombay had achieved their aim and the trade of the port was almost entirely in their hands.[68]

Ports, market-places, and areas of coffee cultivation

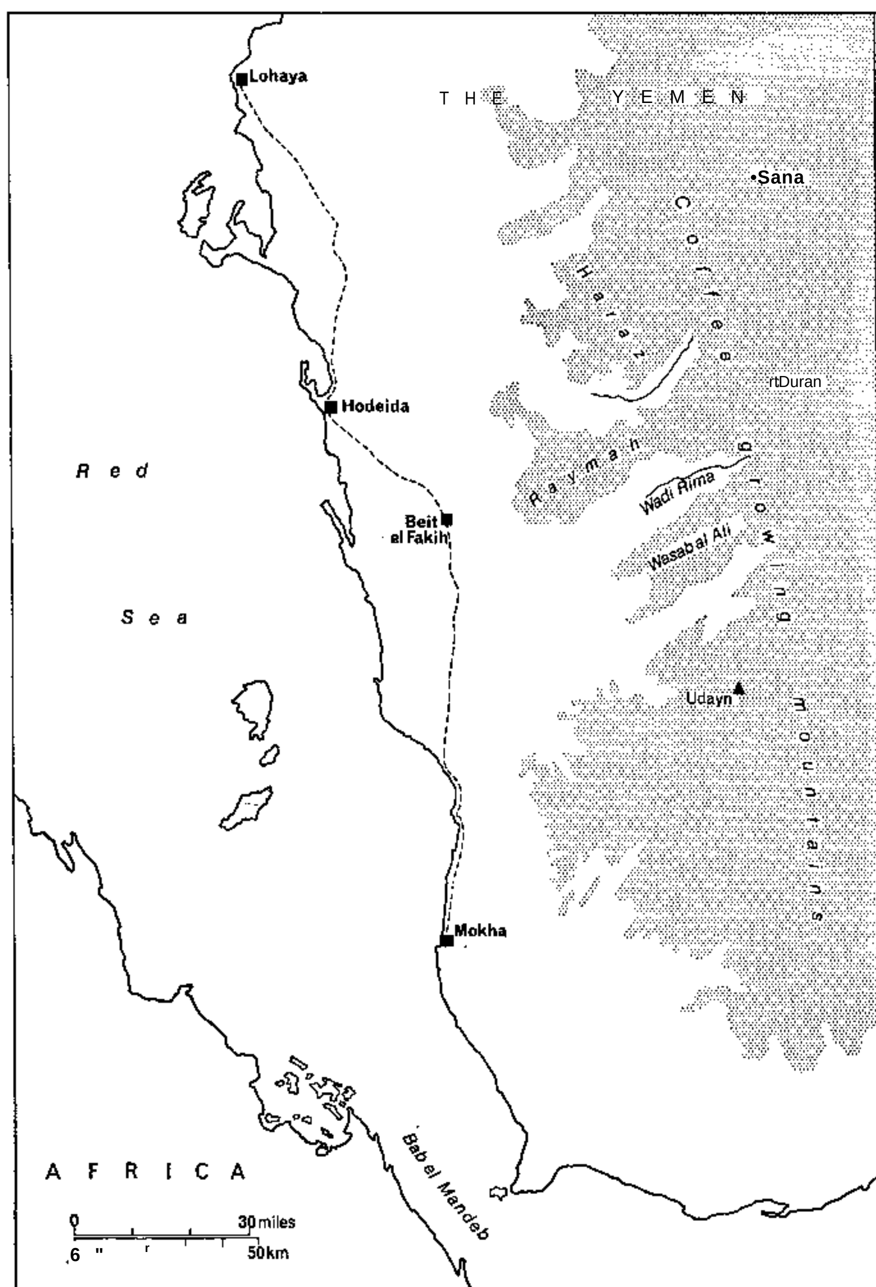
To many European travellers in the seventeenth and eighteenth century the whitewashed seafront of Mokha with the minarets of its mosques in the background presented an impressive sight as they approached the town through the haze of the Red Sea. Hamilton, commanding the *Morning Star* in 1716, describes Mokha as a large town, inadequately fortified, but with a fine aspect from the sea. 'Buildings are lofty, and make a much better appearance without than within. The steeples of five or six mosques raise their heads pretty high above the rest of the buildings.'[69] The narrow ribbon of land between the sea and the high

inland mountains was arid, practically waterless, and devoid of cultivation except for a few date palms. The wells around Mokha were brackish and their water not safe for human drinking. The town's water supply came from a place twenty miles distant and water cost as much in Mokha as beer did in Europe. There was nothing in the surrounding landscape in the immediate vicinity of Mokha that could suggest to a newcomer the reason for its existence. In common with so many other cities of Islam, sharing the twin symbols of movement, the desert and the caravan, Mokha also seemingly lived in a geographical vacuum.[70] But the analogy is deceptive. There is no question that it was primarily a city of trade, but in coffee it had an internal source of strength denied to many other towns of the Middle East that lived by the profits of a transit trade. Jedda, its main rival in the Red Sea during our period, had nothing comparable unless one counts the pilgrim traffic.

The use of Mokha as a port and a trading centre by the European trading companies was dictated by both its commercial pre-eminence and shipping facilities. The entrepôt trade reaching out to India, Black Africa, and the Mediterranean had given rise to a resident population of Syrian, Armenian, Jewish, and Indian traders who were able to offer skilled commercial and banking services. Speaking of the coffee trade La Roque remarked that the Hindu 'Banyâns' not only understood it perfectly but also 'performed in Arabia all the functions of Jews in Turkey, and Brokers in Europe'.[71] In a marine chart and panorama of Mokha prepared by Augustine Fitzhugh and published in 1683 it is described as 'the Chiefest towne of trade for Shipping in all Arabia Felix'.[72] The chart also provides the nautical reason for the European preference for Mokha. The coast of southern Arabia was characterised by a lack of good harbours. Apart from Mokha, the Yemen possessed only two other ports: Hodeida and Lohaya. Both were inaccessible to European shipping. The approaches to Lohaya were so obstructed that even the smaller vessels were obliged to anchor at a great distance from the town.[73] Even Mokha had no proper harbour, and ships of larger tonnage were recommended to anchor in the road two and a half miles from the city in seven fathoms of water, though the Indian shipping being of shallower draught could approach nearer to the shore and ride in waters three fathoms deep.[74] But the ports of both Lohaya and Hodeida were extensively used by the Turkish and Arab merchants shipping coffee to Cairo and Alexandria, and at a time of emergency, as for example in 1721 when ships had to be loaded in a great hurry, even the Company shipped coffee through the Hodeida route.[75] It was brought down to Mokha in country boats and then transferred to the Company's ships. In the correspondence between the Court and the Mokha Factory there were a great many references to the question whether coffee should be brought down to Mokha from the inland markets by

land or whether Hodeida, a port nearer to the main growing areas, should be used. The argument against using the Hodeida route was the local wind system that did not allow the boats to get through to Mokha before late in the season.[76]

Although the Company used Mokha for all administrative business, by 1720 most of its coffee was being purchased at Beit el-Fakih. All contemporaneous accounts agree that it was the most important market for coffee in the Yemen. The town was larger than Mokha but politically placed under the governor of Mokha. Coffee was brought to its great bazaar, the *qaisariya,* with double courtyards and covered galleries every day of the week, except Friday, the Muslim day of rest, and in La Roque's accounts we once again come upon the mention of whitened mosques, the high minarets of which enriched the view of the town. In a country where wheeled conveyance was rare and transport charges likely to affect the margin of merchants' profits, the location of market-places and ports was naturally an important determinant of the pattern and flow of trade. That the city of Beit el-Fakih was favourably situated for the coffee trade even the contemporaries noted.[77] It was only a days' journey from Hodeida and Lohaya, and the hills on which coffee was grown were even nearer. The preference shown by Arab and Turkish merchants sending coffee to Jedda and Cairo for Beit el-Fakih as opposed to Mokha can be explained by the juxtaposition of these two features alone. On the one hand, coffee growers, large and small, could market their produce much more cheaply and easily at Beit el-Fakih than they could at Mokha, and on the other the proximity of Hodeida and Lohaya to Jedda and Suez meant considerable economies to merchants accustomed to ship coffee in slow-moving country boats. Once on the scene the servants of the European trading companies became aware of the facts very quickly and could see little other alternative to purchasing coffee at the great inland mart. In 1732 in a highly informative letter, Richard Martyn and Charles English, supercargoes, put forward the following argument for trading at Beit el-Fakih. The Company had asked the factors to try to encourage the local merchants to bring their coffee to Mokha since it would save the expense of the journey to Beit el-Fakih. This, the supercargoes replied, would be difficult to achieve. Most of the coffee that came to the northern market town was from villages three to four days' journey away from it, and it was hardly to be expected that suppliers would bring down their coffee to a place farther by road, by-passing an existing centre of trade, and sell it at a lower price. In terms of supply Mokha and Beit el-Fakih were two quite separate markets, and coffee sold at the port was brought from areas to the south of Mokha. 'It is therefore,' the letter concluded, 'their interest to send it here as it would be a great charge to send it to Beetlefuckee.[578] The demand at Mokha came mainly from Basra, Persia and Surat.[79]



The Yemen: coffee growing areas.

The existence of its mountains, in many places rising to altitudes over 7000 feet, and the rain clouds which they attracted, enabled the Yemen to support a level and type of cultivation comparable to the Mediterranean. From the mountains, as La Roque says, came the wealth and plenty enjoyed by the kingdom.[80] The mist which rises in dense clouds from the valley floors also prevented the soil from drying out, and French travellers in the early eighteenth century were astonished to see coffee trees facing the south being grown under the shade of other trees, which saved their blossoms from being scorched by the heat of the mid-day sun.[81] The best coffee was grown at heights of 3400-6800 feet, and a survey made by William Phipps in 1721 divided the areas serving Beit el-Fakih into three categories, distinguished by the quality of their coffee and the distance from town.[82] The coffee most preferred by Europeans came from Wasab (2 days' journey), to the south of Wadi Rima, and Safal (5 days' journey) but the quantity available was limited. The kind most generally purchased was from the Haraz mountains (4 days), Jabal Rayma (i| days), and the district around the mountain town of Duran (4 days). Finally, coffee was also brought to Beit el-Fakih from Sana (6 days) and Udayn (4 days).[83] The latter kind was particularly sought after and it was not unusual to pay 2-5 dollars above the market price for Udayn coffee.[84]

The structure of the market and the determination of prices

While he was describing the coffee market at Beit el-Fakih La Roque remarked that 'the peasants have the Trick of bringing no coffee to Market, when the Price is not that which they like'.[85] He was of course unconsciously referring before his time to a problem that has occupied the attention of economists of our age, namely the response of peasants to price changes. The coffee market of the Yemen is an excellent example of the kind of change which the presence of an internationally traded commodity can bring about in an economy otherwise dominated by subsistence peasant agriculture. Even for our period it had features usually associated with well-developed and highly competitive markets, and there is evidence that the cultivation of coffee had expanded with the increased demand from Europe, many mountainous areas being planted with coffee trees, which had never grown them before.[86] The records available to us are generally silent on the details concerning the production of coffee. The average size of coffee plantations, the number of producers, and the nature of the labour employed are all questions to which no answer can be given. That there was a large number of very small producers we learn by accident when the Mokha Council ordered the factors at Beit el-Fakih to purchase coffee from the peasants who brought their produce in small lots directly to the mar-

ket.[87] By avoiding the larger dealers, it was hoped, the price could be kept steady, and since the market was plentifully supplied the stocks left in the hands of the would-be engrossers were inferred to be such as they could not get rid of even to the Turkish buyers except at a loss.

This incident, insignificant by itself, illuminates an important theoretical point when seen in the context of other market transactions. The notion that in pure competition there is just one price over which individual sellers have no control and at which they can sell their entire output is likely to be valid only under equilibrium conditions. When there is a divergence in the level of supply and demand because of the presence of time-lags, anticipation, and variation in stocks individual sellers can find themselves in the position of monopolists, with a downward sloping demand curve. The coffee market had all the characteristics of a competitive market, and yet conditions were constantly changing from year to year and over shorter periods, giving rise at times even to bilateral monopolies. The widely varying prices at which transactions were concluded can be taken as an indication of disequilibrium conditions with the supply and demand curves regularly shifting to establish new points of stability for individual buyers and sellers. The marketing of any commodity usually involves three distinct stages. There is first of all the producers' market at the port of shipment. The wholesale dealers who buy in this market resell their product either in raw or processed form in the consuming areas, which are served by a separate distributor or retailing network. The first market is of course affected by the second and the third over a period of time. But in the short-run its own internal structure is likely to be just as important. From the latter point of view it is possible to distinguish three vital components of commercial decision-making: the processes and institutions by which buyers and sellers make contact and transactions are completed, the nature and type of information available to them, and finally the past experience and knowledge which the dealers have about the behaviour of the market. For example, if the selling side of the market is more concentrated than the buying side, prices will be determined by the monopolistic tendency of the sellers, provided they have sufficient information. Uncertainty and individual propensity to risk-bearing on the other hand might well lead to a situation in which even a monopolist fails to reach the profit-maximising point on the demand curve. In regard to the market for coffee in the Yemen, the total number of buyers over the entire trading season probably exceeded that of the sellers. On the whole one gets the impression that in the first half of the eighteenth century at least there was excessive demand rather than excess supply in the coffee trade. This was the conclusion reached by Phipps in 1721 when he ascribed the rise in the price of coffee to the Europeans settling in Mokha, while admitting that its immediate cause was the destructive

effect of the great famine which had occurred four years before.[88]

There are other instances of the Bombay Council's conviction that a structural shift was taking place in these years in the demand for coffee. The Arab merchants were aware of the increase in European buying and were not slow to take advantage of the situation. But the European share of the market, as the Court of Directors was first to point out in 1719, was no more than one-eighth of the total exports, the greater part of the demand being from the Middle East.[89] In 1721 the exports to the Ottoman Empire, Persia, and India were estimated to be just over 50000 bales and a later estimate puts the figure as high as 60000-70000 bales annually.[90] According to the actual computations of the relative share of each group of traders, which were made by the Company's servants at Mokha, the proportion of coffee exported by the Europeans was larger than that suggested by the above estimates, though this could possibly have been due to a general underestimate of the total exports.[91] In 1732 John Hawys observed, as he was comparing the two coffee markets in the Yemen, that at Beit el-Fakih some single merchants bought as much coffee as all the Europeans put together.[92] Outnumbered as the European buyers were compared to those from the Middle East, their influence made itself felt in the market in two ways. The timing of their purchases often coincided with the arrival of the Jedda and Basra merchants, and few of the latter ever co-operated with the English or the Dutch East India Companies in their buying policy. The demand from Europe also represented a new and an additional element in the market, disturbing the existing calculations of the merchants. Paradoxically it was easier to buy coffee in small bulk than large, as was required by the European shipping, and a higher price was sometimes charged on dealings involving large quantities. The reason for this peculiarity will become clearer when we look at the sellers, but it should be noted that most of the purchases took place on the basis of free bargaining between the buyers and sellers, and both sides of the market had access to full information on competitors' intentions, bids, and the final prices.

It is reasonable to assume that in the buyers' market fairly competitive conditions would have obtained, considering the number of coffee purchasers, unless rings were formed. This indeed happened on several occasions. In 1724 Robert Cowan reached an agreement with the Dutch and the French Chiefs not to pay more than 150 dollars per bahar of coffee in order to break a similar combination on the part of the Beit el-Fakih merchants. In 1732 the proposal for a ring with the French was justified on the ground that competitive bidding would only put money into Arab pockets.[93] However, it was more common to find the officials of the trading companies competing against one another rather than acting in concert. On the selling side it has already been implied

Table A.16. ***The East India Company's coffee suppliers at Beit el-Fakih 1735***

Name	Quantity supplied (bahar)*	%	No. of dealings	Average price of supply (Spanish dollar)
Saed Mahidy Hallaby	215.76	23	14	125
Hassan Mogabus	155.85	17	17	125
Dorsee Gocall	152.93	16	10	137
Hassan Galdee	131.76	14	19	115
Abdul Wully	76.97	8	6	130
Megjee Mulejee	36.59	4	8	127
Sulla Giabba	19.46	2	1	129
Gibelly Alhaima	16.86	2	3	115
Hya Ibn Ali	16.56	2	4	126
Hya Gutabi	15-99	2	7	122
Emir Almaes (governor)	14.25	2	4	134
Sowji Gonjee	11.76	1	2	118
Saed Hemady	11.11	1	2	135
Naranji Kimji	8.17	1	1	117
Ismael Gutaby	5.07	1	3	119
Abdella Mahmoud	4.88	1	3	121
Hamud Ali Surady	4-79	1	3	115
Ali Salee Hudy	3-99	0.5	2	117
Saed Hemady	3.69	0.4	3	114
Hya Futta	3.22	0.4	1	139
Abdella Ibn Hamud	2.59	0.3	4	122
Fuqueer Hegajee	2.39	0.3	3	114
Hya Herajee	2.34	0.3	3	127
Jetta Ponji	2.10	0.2	1	126
Faqueer Surady	1.93	0.2	4	122
Ibrahim Oman	i-53	0.2	1	130
Omar Ibn Hamud	1.48	0.2	2	123
Isouf Mensuree	1.08	0.1	2	114
Mahmud Hassan Hetamy	0.98	0.1	1	124
Ubed Subell	o.97	0.1	2	121
Surgaby	0.85	0.1	1	140
Hady Ibn Hamud	o.75	0.1	2	114
Saed Ali Surady	o.73	0.1	2	114
Abdul Salem Hindi	0.72	0.1	1	115
Hamud Hassan Gutaby	0.68	0.1	1	113
Hady Suaal	0.41	0.04	1	i n
Saed Omar	0.41	0.04	1	115
Hamud Muabul	0.40	0.04	1	114
Hamud Uwade	0.38	0.04	1	114
Hameed Culufa	0-35	0.04	1	" 5
Sudik Giaffar	o.33	0.04	1	113
Musa Gadiff	0.23	0.02	1	112

Sources. Factory Records Egypt and Red Sea, vol. 2, No. 342, p. 324; *ibid.,* No. 348, p. 342; *ibid.,* No. 356, p. 361; *ibid.,* No. 372, p. 389.
Note. All percentage and price figures have been rounded.
*i bahar (Beit el-Fakih) = 814 lb

that the market was more concentrated. In fact there seem to have been two extreme contrasts. At one end there were a few substantial dealers in the position of oligopolists, while the other end contained a large number of small suppliers who were price-takers, following the lead set by the bigger merchants. The complaints of 'engrossing' by Arab traders were just one manifestation of the oligopolistic tendency of the market. There is also other, and more concrete evidence. For a few years from 1735 the Company's Mokha Factory Records contain the names of every merchant from whom coffee was purchased at Beit el-Fakih, together with quantities and prices.[94] An analysis of the purchases for 1735 confirms conclusively the skewed distribution of the sellers (see Table A. 16). Out of a total of 42 merchants or sellers, 5 supplied 78.6 per cent of the Company's coffee. The individual share of the remaining 37 was under 4 per cent, that of 29 being under 1 per cent. As the purchases began at the middle of March, prices rose from 109 dollars to a maximum of 145 dollars at the end of June, declining slightly in the first week of July when the buying ceased. The transactions of the leading merchants were spread fairly evenly throughout the season, but the average price at which they sold their coffee tended to be at the higher end of the scale. Only one merchant, Hussan Caldee, with 14 per cent of the total sales had an average price below 115 dollars. The other sellers came into the market in a more random fashion, though in terms of frequency the distribution is somewhat skewed towards the lower end. Assuming that the dispersion of the East India Company's coffee purchases reflected the overall characteristic of the market, we can conclude that the smaller sellers were in no position to influence prices, though the total quantities being marketed by them would obviously be one of the determining factors in the sales strategy of the bigger dealers. The influence of the latter did not go unnoticed by the Company's servants, the role of Saed Mahidy Hallaby, the most prominent among them, being especially singled out for comment. In 1734 it was mentioned that the price of coffee was likely to fall after Saed Mahidy had sold his stock, 'as he has a great influence over that market'. Four years later Nicholas Goodwin considered it something of a triumph that he broke Mahidy's asking price by persuading the other leading dealer of Beit el-Fakih, Dorsee Gocall, to sell his coffee at 86 to 87 dollars per bahar, a price at which Mahidy was also forced to sell.[95] These examples lend practical weight to the theory of oligopoly in which indeterminacy of prices is taken to stem from the unpredictability of competitors' pricing policy. They also explain the reason for the Company having to pay higher prices for larger single lots of coffee. The big dealers who held the stock were reluctant to sell too much of it all at once because of an anticipation of rising prices.

While it is true that in general the structure of the buying and selling

side of the market affects the joint interaction of demand and supply which simultaneously establishes a pair of numbers, the quantity traded and the level of price, the exact process through which this takes place has to be elucidated. In the case of coffee, from the descriptive accounts of the market in the Company's records it is possible to distinguish the various factors operating on the course of prices. The most important of these was naturally the size of the crop.[96] An abundant or a short harvest could be expected to produce immediate effects on prices, but a failure of rains and an anticipated shortfall could also lead to higher prices even in a year of plenty.[97] The rate at which prices would rise must depend among other things on the cost of storage. The speculative demand arising from variations at the source of supply was an important feature of the coffee market. Moreover the presence of European buyers at Mokha and Beit el-Fakih from 1710 onwards had the effect, as we have already mentioned, of shifting the demand curve in an upward direction, which made it profitable for the local merchants to buy up coffee in the slack season for reselling at a later time. This was a problem of dynamic price adjustment brought about by a structural change. Similar arbitrage operations also occurred within one trading season as a result of the marked rise in prices. Unlike most agricultural commodities, the Yemen coffee was not a seasonal crop and it could be harvested all the year round. But as the period of buying extended from about March to August, because of the dependence of shipping on the climatic conditions in the Red Sea, the bulk of the supplies came into the market during these months.[98]

From the time the market opened to the peak month of June, prices rose almost continuously, each stage of the increase being marked by the arrival of the ships from Jedda, Basra, India, and Europe, and dealers with large stocks on their hands stood to gain considerably. One of the chief attractions of keeping a permanent factory at Mokha was the fact that the servants would have at least seven months in the cheapest season for buying coffee because 'the ships which come down the Red Sea to supply the Turkey market and the ships from India do not arrive till April and May at soonest and depart again in August and September'.[99] Besides the level of demand in the internal markets, the most decisive influence on the daily movements of coffee prices was the fluctuations in the intermediate markets at Jedda and Cairo. The connection was so close that the Company's servants compared it to the operation of the stock exchanges in Europe. According to a letter written in 1733 by Francis Dickinson and John Hawys, it was these two markets which governed 'those of Lohayah and Beetlefuckee and the Price of Coffee is influenced by it, and in a manner as stocks in Europe rises and falls as good or bad news arrives from thence.'[100] The market in Mokha was in its turn ruled by that of Beit el-Fakih, and the dealers marked

their prices up or down according to the news from the inland centre.[101] Later examples mentioned in the English Factory Records at Mokha also confirm the impression that sensitive as the market was in its daily movements to the timing and level of European buying, its overall behaviour was governed by the bigger markets and demand in the Middle East.[102]

17
IMPORTS FROM CHINA

The tea trade

The spread of the tea-drinking habit in Europe during the early years of the eighteenth century was an astonishingly rapid process in the assimilation of a new economic product. Its diffusion was easily comparable to the adoption of Indian cotton textiles in the seventeenth century, and the complementarity of tea and sugar probably explains the relative decline of pepper in household budgets. Pepper was no longer a prestigious high-cost commodity; money spent on it competed with other attractive alternatives. The greater availability of sugar supplies from the West Indian plantations and the decline in its cost provided the context in which the mass consumption of tea could become a reality. For people in the lower income groups, tea as a beverage was appealing not only for its intrinsic taste and quality but also as a means of taking sugar. The relationship between the two products was so close that a pamphlet printed in 1744, at the request of the tea dealers, attempted to estimate the total English consumption of tea from the known consumption of sugar. The argument was ingenious, even though the calculations were largely based on guesswork. By taking the total consumption of sugar at 800000 cwt and establishing the appropriate coefficients, the author concluded that on an average two million pounds of tea were drunk every year in England.[1] This was a figure comfortably in excess of the quantities legally imported by the English East India Company and pointed to the widespread and dangerous prevalence of smuggling. The Company, the Excise Department, and the scrupulous tea dealers all suffered together from the effects of high duties, and the public in addition were sold large quantities of adulterated tea, variously described as 'damnified' or 'fictitious' tea.[2] The government did not need elaborate arithmetic exercises to be convinced that the retail sale of tea exceeded the legitimate imports. It had more concrete and reliable evidence at hand. But what the true and precise extent of tea smuggling was, no one was sure of. The figure of 2 million lb in the 1740s carries conviction as an estimate of the total national consumption. It may even err on the side of an underestimation in view of the Company's escalating imports a decade later. On the other hand,

the annual fluctuations in the Company's imports were quite considerable, and this instability in supplies could have affected the volume of smuggled tea.

The rise of tea to a prized profit-making status in the East India Company's trade is well documented, but the history of no other article imported by the Company is as obscure as that of tea. The nature of demand, the wholesale distribution, the methods of retailing, and the financing of the tea merchants, over all these topics hangs a big question mark. Information is scanty even on the quarterly sales, and it was only the occasional crisis in trade which drew the Court of Directors' attention to the European end of the market. It is likely that the exact way that tea came to acquire its mass popularity will never be known. The references to tea in the Company's records begin to appear from the early 1660s and the first substantial imports occurred in 1678, though 222 lb were imported in 1669. There was a fairly sustained expansion from 1682, and the article was beginning to acquire its reputation as an exotic delicacy. In 1685 the Company for the first time mentioned its new role in a letter to Fort St George: 'In regard Thea is grown to be a commodity here and we have occasion to make presents therein to our great friends at Court; we would have you send us yearly five or six canisters of the very best and freshest Thea. That which will colour the water in which it is infused, most of a greenish complexion is generally best accepted.'[3] The main difficulty experienced in these early years in organising the tea trade on a stable basis lay in gaining access to the source of supplies. Tea was regularly imported by the Chinese junks trading to Batavia, and for the V.O.C. the annual junk traffic provided a dependable means of obtaining tea for re-export to the Netherlands. But with Bantam lost to the Dutch and the trade to the Chinese mainland still in a state of uncertainty, the English Company lacked the essential security of supplies.[4] Before the establishment of a regular commercial relation with Canton in the first two decades of the eighteenth century, tea was brought back by individual ships which managed to get through to one of the ports of China. In the 1680s the Company looked to the country voyages organised by the Madras servants for its supplies of tea.

As the Company's interest in gaining direct access to China increased through the years, the freedom given to the servants and ships' captains for private purchase of tea was gradually curtailed.[5] The Court had suddenly become aware of the enormous potentials of tea sales in England, and one of the sure signs of their serious attitude towards the Chinese imports was a stinging rebuke delivered to the Madras Council for attempting to make money out of the servants' private trade to China. 'It is very true you had our order to buy and send us home China goods', the Court wrote in October 1686, 'which order you catcht hold

of, and instead of buying, sent us your own at excessive rates, not regarding what you put upon us, so you cleared your own account to great profit.[56] The letter went on to deplore that the Madras servants should have acted as both buyers and sellers, but for the future the Court gave them permission to send home entire cargoes of China goods, which were imported to Fort St George either by themselves or by Indian merchants. The exact conditions of such a partnership between the Company and the Madras Council were spelt out clearly. The Company warned them that the prices of Chinese commodities could vary by 90 per cent according to the quality, which made it exceedingly difficult to give precise commercial instructions on what to buy. But the authorities at home promised to bear the risks of shipwreck, though the servants were to be responsible for losses on sale and pay the Company a commission of 20 per cent if any profits were made. The Madras Council could reimburse themselves from the treasury the first cost of the goods once these were shipped for England.[7] The Company only very rarely granted the right of sharing the profits of the direct trade with Europe to their servants in the Indies, and if it was not for the shock caused by the loss of Bantam and the interruption to trade which the approaching war with the Mughal Empire made inevitable, the Madras servants would have found themselves actually debarred from trading to China.[8]

These exigencies and the sporadic nature of the Company's own voyages to China explain the discontinuities in its tea imports before 1701. The largest quantity imported in these years was in 1690 with 38390 lb. The average cost price for the consignment came to only about is per lb, while it was sold at nearly 6s. Even at this exceptionally high mark-up ratio the Company probably just broke even on the tea sales, for in October 1690 the Court of Committees wrote to India that the current customs duty on tea was 5s per lb flat rate. The high level of duty made it evident that the Company could no longer import any ordinary tea, and nothing but the super-fine quality would pay either the freight charges or the prime cost.[9] It is difficult to assess what result the instruction had on the quality of tea purchases. In 1692 the cost price paid indeed jumped to 4s per lb, but there were no further imports until 1697. The demand for all kinds of China goods was said to be low in the 1690s, and the general disorganisation in the Company's trade created by the war, for the time being brought to an end the first phase of the tea imports.[10] From 1697 the attempt to reopen the China trade began in real earnest, and two ships the *Trumball Galley* and the *Nassau* were sent to Amoy with a combined stock of £53ooo.[11] They returned in 1699 but their invoices were in a very confused state. However, the tea imports for this year amounted to 13082 lb with an average cost price of 2s 4d per lb. The sale price in London was high at 14s 8d,

though not as high as in 1697 when it had reached 18s 2d per lb. Regular imports of tea were resumed from 1701 and continued until 1706, after which there was another brief period of discontinuity. By 1713 the Company's right of access to the great commercial port of Canton had been partially secured, and regular shipment of tea directly from China began in 1717. Small quantities were still re-exported from Madras on rare occasions when a China ship was inadvertently detained in India and found itself unable to sell the tea in the local market, but the annual voyage to Canton had become the mainstay of the Company's tea trade.

The instructions given to the China supercargoes make it clear from as early as 1704 that tea was regarded as a commodity of general use in England.[12] It is possible that this was the critical decade of take-off for tea consumption on a large-scale. In 1710 tea was reported to have been imported from Holland and the Court of Directors briefed the sub-committees to consider the legal aspect of the continental imports.[13] This was a year when the demand was active in England and tea was a profitable commodity, which no doubt accounts for the fact that supplies were being sent over from Holland.[14] The hypothesis of an upward shift in consumer demand is supported by the remarkable increase in the Company's own imports from 1713. Between this year and 1720, for example, the total imports (i.e. over six years) amounted to 2.146 million lb. The progress made during the next four decades can be studied from Table A.i 7. Each decade saw an acceleration in the growth

Table A. 17. ***Total tea imports*** *by decades 1J21-1J60*

Year	Quantity lb	Growth rate %	Value £
1721-30	8879862	—	611441
1731-40	11663 998	3i	607469
1741-50	20214498	73	1052373
1751-60	37350002	85	1692 698

Sources. India Office Records, East India Company, General Ledgers, L/AG/i/i/vols. 14-20.
Note. This table is a condensed version of the full annual figures in Table G.i 9.

rate over the previous one; a comparison between the first and the last shows that the total quantities of tea had increased by more than five-fold. When we turn to the price movements, we can see that the trend was equally favourable to the Company. The average cost price during 1713-21 varied between £0.08 and £0.10 per lb. These rates had fallen to £0.06-0.07 during the next decade, and from 1741 onwards the

price of tea remained virtually stationary at £0.05 per lb. The destruction of the Tea Ledgers, which contained the details of the tea sold in London and the prices realised at the auctions, makes it difficult to reconstruct the exact margin of profits in the eighteenth century. However, in the General Ledger Books, the total revenue derived from the sale of tea and Chinese porcelain is given under a combined heading. These figures are reproduced in Table A. 18 together with the quantities

Table A. 18. ***The quantity of tea sold and the sale value of tea and porcelain 1717-32***

Year	Quantity sold lb	Sale value tea and chinaware £
1717-18	46i395	309553
1718-19	562258	375454
1719-20	512987	319293
1720-1	316182	189610
1721-2	1056263	348829
1722-3	1569224	523570
1723-4	110459	209809
1724-5	489423	199612
1725-6	334242	124931
1726-7	581 712	240893
1727-8	633182	211434
1728-9	1353866	458656
1729-30	1490355	471473
1730-1	1049593	353045
1731-2	141464	97602
1732-3	486 203*	175060

Sources. **Quantity figures are taken from 'An Account of the quantity of Teas sold by the East India Company . . . 1716-32', Memoranda of the Committee of Correspondence, vol. 100. The sale values are calculated from Tea and Chinaware Ledger A/c General Ledgers, L/AG/i/i/vols. 14-16.**

Mote. **The sale figures are the *gross* receipts and would differ from the total sales receipts given in Table A.24, col. 10, p. 438 as the latter are *net* receipts. The accounting year runs from July to June; tea was sold in two annual sales held in March and September. The figures given here are for September and March sales.**

•September sale only.

of tea sold by the Company. It can be easily verified that in spite of the inclusion of chinaware in the total the contribution of tea was likely to have been the main component, and taken as a group the share of these two items in the overall sale receipts of the Company in the period from 1717 to 1760 was very considerable.[15]

The decade rates of expansion of course mask important annual movements. There were two major sources of fluctuations in the yearly imports. The demand in Europe was far from being a constant factor,

and at a time when all the competitors in the trade were rapidly expanding their supplies in anticipation of favourable markets at home it was inevitable that periodical gluts should appear. The second source of instability came from the long duration of the voyage to China and back. Ships destined for Canton followed a complicated time-schedule, and quite often they were required to call in at Bombay or Madras on the way to China. Accidental delays or exceptionally favourable winds met during the voyage meant that the China ships were not always able to follow strict sailing instructions. On the whole, it was the changes in the Company's demand for tea and the price limits imposed on the supercargoes that caused the supplies to move upward or downward. As with other commodities, the most important guidelines available to the Committee of Correspondence in its tea investment were the level of stocks in the warehouses and the prices offered by the buyers at the auctions. But in contrast to the cotton textiles, which were regulated mainly through the mark-up ratio, the inventory holdings and the estimated quantities expected appear to have been the principal decision variables for tea. Any imbalance between the supply and demand was immediately apparent and received detailed attention from the sub-committee responsible for ordering. The break in the imports during 1715-16, for example, was explained on the following ground in a letter to Madras. 'We have resolved,' the Court wrote in 1714, 'to send no ship directly for China out and home because our markets are overglutted with Tea as well by what we have in warehouse and received by our shipping as by the *Windsor* and *Concords* importing so great quantities this summer.'[16] The large imports of the early 1730s provoked similar comments. In March 1732 the Bombay Council were informed that the Company had enough tea in its warehouses to satisfy all demand for two or three years. The two China ships which were being prepared for the voyage to Canton received orders to return to Bombay with suitable goods for the local market, including £20000 invested in gold.[17]

The origin of the oversupply of 1730-2 can be traced to the general European development in the tea trade. The relatively small imports of the English East India Company during 1727-8 had contributed to a rise in the price of tea, particularly that of the green variety. At the same time, the Company was expressing concern that the Ostend Company's servants appeared to have been more successful than its own supercargoes at buying tea competitively. The Court had been assured for some years that the Ostend Company only purchased lower quality tea in Canton, which accounted for the difference in price. But the members openly wondered in 1728 why this refuse tea should sell 'within a trifle at the same price as the best Bohea Tea in all the Foreign Markets'.[18] The supercargoes were instructed to buy *1000 piculs* of the lowest priced tea purchased by either the Dutch or the Ostend ships. The Com-

pany was not only alarmed by the obvious success of the imperial traders in penetrating the Canton market and the high prices realised in their sales at Ostend, but it was also disturbed by the efforts of the Dutch to abandon the practice of buying tea from Chinese intermediaries in Batavia and to send ships directly to China. In December 1730 the Correspondence Committee noted that the cargo of the three Dutch ships which came home from China had met such a good market that the V.O.C. were encouraged to send three more ships to Canton.[19] The result of the intensifying competition was a decision by the Court of Directors to try to organise a corner in the supply of green tea. So far the English Company had aimed to preserve an even balance between the green and the black varieties, though in individual years the proportion of the green tea was substantial. In 1729, however, the English supercargoes arrived in Canton with strict orders to 'engross' the green varieties available in the market.[20] The enormous supply of the latter to England from 1730 to 1732 was the direct consequence of this decision.

The extent to which the European market in tea was affected by the increased imports of the various East India Companies in the 1730s is graphically revealed in the correspondence between Thomas Hall, the wealthy London merchant, and Jacob Senserf & Son of Rotterdam. Thomas Hall had begun his successful commercial career first as the captain of an East-Indiaman in the service of the Company and later as a member of the Ostend Company. After his return to England in 1726, he built up a highly successful business, dealing in East India goods, particularly tea.[21] Hall's dealings in tea went quite well until 1731. In February his Dutch partners, Jacob Senserf & Son, noted in their reply to an earlier letter, that large quantities of Bohea and green tea still remained in the English East India Company's warehouses in London. The Company had fixed its offer price of both the varieties at 5s per lb, and the Rotterdam firm thought that at this price, it was impossible that Bohea tea could be brought over and sold in Holland. The prospects for green tea were better, as the Dutch market was less well supplied in this variety. The letter concluded, 'As to the tea trade in this country, we might tell you that what with the sale of the Dutch Company, the French and Ostenders, the vast quantity brought over with the last Dutch ships, the straggling parcels of preceding sales, all this keeps the prices very low ... in all likelihood the Resolution of the English India Company by setting the prices at 5s would give some life to the price of the Bohea, if the great quantity of 600,000 lb which the Dutch East India Company will sell in the spring did not knock down all speculators, for that will sell in our shops and furnish them till the arrival of the coffee ships in the month of May or June. It is certain that the fixing of the price at 5s will stiffen the prices here; but not of any moment, neither will it be worthwhile to engage in it at present as long

as Europe is so vastly filled with said commodity.'[22] The reference to the English Company's attempt to hold up prices is interesting as an example of the oligopolistic tendency of the market. Although the pricing policy adopted by a big importer acted as a market leader, by August 1731 prices had fallen further in Holland, and Jacob Senserf wrote to Hall, 'Your prediction about tea is very just, it will certainly be as cheap in the years 1731 and 1732 as it was in 1721 and 1722, but this cannot continue long and a revolution must happen in this trade.'[23] Eight years later, another business associate of Hall, Diederick Smith of Amsterdam was still lamenting the amazing change which the tea trade had undergone within the last few years.[24] The quick and high profits had gone, and the great speculative dealers such as Pels and De Neufville began to get out of tea dealings.[25]

Apart from the effects of its own overtrading and the competition from legitimate European traders, the East India Company was also complaining about the illicit tea trade in the 1730s. Great quantities of tea sold by the French Company were taken to the Channel Islands and then smuggled over to England. Robert Hewer informed Hall in 1733 that large amounts of tea sold at Nantes were going to Guernsey, adding darkly, 'you may guess where it is designed for'.[26] The smuggling of tea into England from the Continent was an important topic of debate at the meeting of the Company's General Court, held on 9 August 1732, when Sir Matthew Decker, the Chairman of the Company, informed the members, 'Another heavy article is the great Dutys that the necessity of the Government has from time to time been obliged to lay upon East India goods by which it is obvious to every body what great quantitys are run at present almost of all species of goods, but more particularly tea, which by reason of its great Duty is poured in upon us from all parts of Europe, by which the consumption as to the Company greatly decreases.'[27] Decker's reference to the effects of the high rate of taxation on tea was a passing comment on the financial losses suffered by the Company from the frauds committed in Canton by the supercargoes, which the General Court had met to discuss. The economic impact of smuggled tea and even amounts legally imported from the Continent had a longer history, for the Company submitted a series of draft suggestions to the Customs House in 1721 on the amendment or improvement of the existing fiscal regulations on East India goods. One of the proposals was 'to Review and amend the Law as it now stands of giving certificates for Forreign Tea imported, as is now dayly practised, which gives great encouragement to the bringing it in from Ostend.'[28] The Commissioners of Customs agreed with the Company's view and recommended that no official certificates or licences should be issued for importing tea from Holland and Flanders, as their own experience pointed to a large inward traffic in tea from Europe. This inflow was commerci-

ally feasible only if the prices on the Continent were lower than in England. But the tea trade in this period was highly volatile and supplies moved into or out of England according to marginal changes in the market. For tea illegally imported, of course, the price differential was much higher. Wholesale dealers who bought tea at the Company's auctions and paid the duty could find their stocks suddenly unsaleable if a large consignment of smuggled tea arrived in the country. One of these periodic dislocations is vividly described in a petition presented to the Court of Directors in September 1721 by a number of tea dealers, among whom was Thomas Twining.[29] The dealers were protesting against the Company's decision to lower the reserve price on tea at the coming autumn sale. As a reprisal against the Ostend Company's imports the Company had announced in June that the price of green tea would be reduced to 5s per lb and that of black tea to 6s.[30] The announcement, the tea dealers admitted, had damaged the Ostend Company but it did not prevent smuggling, which was still highly profitable because of the high duties. Both town and country were being supplied with a vast quantity of tea clandestinely imported from Ostend. Dealers buying tea for the home market generally gave six to twelve months' credit to the retailers, but now they found that their customers instead of paying the bills had bought further stocks of cheap tea from the smugglers with the money. The demand for legal tea had declined drastically, and the dealers were having to sell it at prices well below what they gave at the candle. Furthermore, the Company's declaration had led to a fall in the foreign markets, as was intended: exporters to Holland and other continental centres were caught with large stocks on their hands purchased at high prices.

This was one of the rare instances describing the actual marketing arrangements adopted by the tea merchants, though the contemporaneous literature on smuggling was ample. Illicit tea seized by customs officers and sensational stories narrated by reformed smugglers before successive parliamentary committees convinced everyone that the problem of tea running was getting out of control.[31] As the legal penalties were multiplied by an alarmed legislature, their deterrent effect actually declined. One of the letters in William Pitt's correspondence at the time of the Commutation Act summed up the legal opinion in the following terms: 'The statute of the 19 Geo. II tho continued to enforce on the ground suggested by myself, does nevertheless deviate so widely from the general principles of the common law of England in criminal cases and is so sanguinary in the spirit of it, that it certainly ought not to be enforced.'[32] That the serious situation was brought about by the government's own action in maintaining a penal rate of taxation on an article of growing demand, no one denied.[33] The rates of duty on tea, imposed and modified by various statutes before 1784, involved extremely com-

plicated calculations, well illustrated by examples in Henry Crouch's practical manual on British customs.[34] The tax reforms of 1724 transferred the flat rate duty of 4s per lb to Excise, and it was now payable by the Company's buyers when they took delivery from the warehouses. But the Company was still liable to pay the import duty levied at the rate of 13.93 per cent on the gross value of the tea.[35] In 1745 the arrangements were again altered. The excise duty of 4s was reduced to is with a supplement of 25 per cent *ad valorem.* The Excise officers were now required to attend the Company's tea sales and note down the names of the buyers and the price at which each lot was sold.[36] The customs duty was raised to 18.93 per cent in 1747 and again to 23.93 per cent in 1759. According to the most authoritative study of the contemporaneous customs regulations, in the years 1750-5 the rate of taxation on tea sales in England was in excess of 100 per cent of the net cost to the buyers.[37]

The East India Company made several representations to the government in the middle decades of the century when its imports were fast expanding to lessen the fiscal burden. In 1733, the Chairman, Sir Josias Wordsworth, announced in committee that he and several other members of the Directorate had waited on Sir Robert Walpole and delivered to him a scheme for the reduction of the duties on tea without any detriment to the revenue. Walpole had promised to study the document and do them 'all the service he was able at a proper time'.[38] He was not able to help the Company, but the timing of the representation was right as a public agitation was being built up over the whole question of the excise laws.[39] The unresolved problem was raised again in 1743 when the East India Company apparently proposed to lend the government -£1 million at a low rate of interest and in return it was to obtain an Act of parliament to prevent the running of tea. The source of this information is a pamphlet written by Sir Matthew Decker, the professional financier in the City and the ex-Chairman of the Company. Decker added, 'The monstrous height to which this illegal practice *[smuggling]* was grown and the damage which the public sustained by it very apparently deserved the attention of our Ministry. But when the point came to be considered, they saw that if the duty on tea was lowered, so as to prevent the running it, the present revenue must be greatly diminished.' On the other hand, the Company found that if too much of its financial resources were committed to the support of the government revenue and any shortfall arising from the reduction in duty, 'then their Expectations would not be answered'.[40] The deadlock was to continue for another forty years until Pitt's Commutation Act reduced the duty in 1784 to 12.5 per cent.

How much tea was actually smuggled into Britain during the first half of the eighteenth century? This is a notoriously difficult question to

answer. Contemporaneous estimates, such as the figure of £800000, mentioned to the parliamentary committee of 1745-6, which was supposed to have been annually paid on the continent for illicit tea, were wildly exaggerated.[41] The sum was more than twice the amount realised from the Company's China sales, and it is scarcely creditable that illegal imports from Europe could have continued on this scale indefinitely without affecting the sale price of tea and therefore the smugglers' profit margin. Another factor which stood in the way of very large quantities being smuggled into the country was the danger and the high cost of the operation. A memorandum of 1784 describes the insurance premium paid by the large London dealers for the safe delivery of tea smuggled from Dunkirk as 25 per cent. When a shipment was made on the smuggler's own account, the Ostend merchants who supplied the tea agreed to bear half the risk if the vessel was captured or the consignment seized before reaching its destination. The third method of insurance was to pay a premium of 21s for every bag of tea containing 27.5 lb, without taking into consideration the value or the quality of the tea.[42] It is perfectly true that the East India Company encountered among the illicit tea dealers men as determined as itself in preserving their special economic advantages. But if the Company, with all its experience of marketing East India goods, was not always able to measure up the demand for tea, how was the smuggler to know what quantities to import? Again, why did not the Company overtrade for a number of years, as it was only too willing to do against legal rivals, and put the smuggler out of business? A probable answer is that the Court of Directors did not know the extent of smuggling, nor the precise impact on its tea sales. With rapidly growing demand the Company's imports responded to the market situation, but it was not easy to establish what proportion of the business was lost to the smugglers. There was a general impression among eighteenth-century observers that the tea imports of the continental East India Companies were mainly destined for the British market. After 1760 the buyers of legal tea complained that they found it difficult to sell in England. The picture may have changed by this time, for the real expansion in consumption and the Company's imports occurred after the conclusion of the Seven Years' War.[43]

During our period of study the most probable effect of the competition from smuggled tea was in keeping down the level of the Company's sale prices. The tea market was characterised by the existence of two prices, the price set and realised by the East India Company at its auctions and the price at which merchants dealt in tea among themselves.[44] If the Company had enjoyed a complete monopoly of supplies, prices would have risen to the point where demand became positively elastic.[45] But the presence of smugglers with much lower-priced tea created a strong,

if slightly odd, duopoly. The prices at which the Company's buyers would bid at the auctions were now a function of three variables, the current merchants' price and their stocks, their past experience of the market, and the amount of information available on the smugglers' activities. In selling its tea, the East India Company followed the standard practice of setting a price on the different varieties put up for auction, and its purpose was to prevent the formation of rings. But the Court of Directors was perfectly aware of the fact that the actual realised prices were determined largely by extraneous conditions. In the 1720s the offer price of tea was occasionally varied from year to year. However, with better knowledge of marketing the offer prices soon became standardised. As the Company pointed out to the government in 1784, 'it is essentially necessary for preventing combinations among the buyers that the power of altering prices should remain vested in this Court. That whilst the existence of such power prevents the evil, and goods find their fair value by biddings at the sale, it becomes wholly immaterial what the prices are at which they are first put up; and accordingly the said prices of Hyson, Singlo, and Souchong tea have not been changed for more than forty years past, nor those of Congou and Bohea'.[46] As the East India Company was not generally responsible for the secondary marketing of its tea, there is little information in the official records on the relative shares of the domestic and foreign markets in the total sales. According to the figures from the Customs House the re-export trade in tea remained proportionately substantial until about 1745. Its share during 1726-30, for example, came to 18 per cent of the sales, rising to 35 per cent in 1741-5.[47] For the next three quinquenniums, the exports were sizeable in absolute terms, though much greater quantities of tea were retained for the home market. The re-exports began to expand again after 1763, when the conclusion of the Seven Years' War allowed the overseas markets to return to normal conditions.

In the instructions given to the Canton supercargoes in 1704, it was said that tea was such a 'considerable article in the profit and loss' of the China investments that its purchase required very careful judgement, particularly in packing and preserving the flavour.[48] The annual list of orders which accompanied the China ships did not share the length and details of the Bengal orders. But the same meticulous care and attention are evident in the guidance given to the supercargoes in buying the different varieties of tea. We have seen in passing that the tea imported by the Company during the eighteenth century falls into the two broad categories of black and green tea. In contrast to the present-day convention which associates the latter with Chinese tea and the former with that from Assam, in our period China produced both the types. Although exact knowledge is lacking, it seems that the black tea in addition to sugar was also taken with milk, as all the early porcelain tea ser-

vices contain both sugar bowls and milk jugs. John Ovington mentions in his description of the tea-drinking habits among Europeans and Indians in Surat that it was generally drunk in India 'either with sugar-candy, or, by the more curious with small conserved lemons'.[49] The early popularity of green tea in England, its high price reflecting the quality and delicacy of flavours, may be an indication of particular social conventions in drinking tea, but it is certain from our detailed import statistics that the share of black tea steadily increased in the course of the century (see Table A. 19).

Table A. 19. ***Different varieties of black and green tea imported by the East India Company {in Ib)***

Year	Black tea Bohea	%	Congo	%	Souchon	%	Pekoe	%
1721-30	3360497	37.8	533166	6	—	—	111660	1.5
1731-40	5337807	45-4	815644	6.9	53503	0.45	141 593	1.2
1741-50	10130247	49-6	316533	1.6	391952	1.92	—	—
1751-60	23634760	63.3	531522	1.38	440840	1·15	104967	0.3
Year	**Green tea Singlo**	**%**	**Heyson**	**%**	**Bing**	**%**	**Misc.**	**%**
1721-30	4577279	52	39991	0.5	242697	2.7	H572	0.2
1731-40	3642271	30.9	1170522	9-9	356207	3·1	146451	1.2
1741-50	8029616	39-4	1320166	6.5	16646	0.05	9338	0.05
1751-60	11259684	30	1378229	3-7	—	—	—	—

Sources. India Office Records, East India Company, Commerce Journals, L/AG/1 /6/vols. 8-14.
Note. These figures are condensed from full annual figures in our original Table (see Table C.i9 also).

The same figures also prove that the bulk of the market lay in the ordinary and therefore the cheaper kinds of tea, both black and green, after 1720. The quality, flavour, and the price of tea naturally depended on the process of manufacture and the stage at which the leaves were picked. The East India Company imported four different varieties of black tea from China. The finest and the most expensive was known as 'Pekoe', according to Robert Fortune, a corruption of the Chinese word meaning 'white down', because the leaves were gathered just as the buds were forming. The next grade was 'Souchon' made from mature leaves. Because of the demand for this type of tea in Canton, it was almost as expensive as the Pekoe and sometimes in the Company's invoices even exceeded the latter in price. The variety known as 'Congo' came from the larger and coarser leaves, while 'Bohea' was the last and the latest picking.[50] The respective proportions of Pekoe and Souchon in the total imports of the Company were under 2 per cent and they were usually

invoiced at about £0.10 per lb. During the two decades from 1721-40 the share of Congo was on average 7 per cent and its price about £0.06. But by far the largest proportion in the total was claimed by Bohea priced at around £0.04: in 1721-30 it was 38 per cent and in 1751-60 no less than 63 per cent. Similar distinctions in quality were found in the green tea also. Here the three common commercial varieties were in order of excellence 'Bing' or imperial tea, 'Heyson', and 'Singlo'. The last of these was the most important English import after Bohea and its price was only marginally more expensive than the ordinary black tea. In addition to these seven typical varieties, the market in Canton offered another cheap and coarse grade of black tea known as 'Ankoy', which was bought mainly by the agents of the Ostend Company, and of course among the choice and expensive grades there were many different subtypes.[51] The mandarins competed with one another in obtaining these rare and delicate teas, as they were much appreciated both at the imperial court and among the ruling élites in China.[52] The enormous internal demand for tea and the extent of its trade in the Chinese Empire were known to European traders in the eighteenth century, but no servant of the English Company in our period succeeded in going beyond Canton to the producing districts. James Naish was the only supercargo ever to have spent a whole year (1730-1) in Canton, much to the amazement of the local officials and merchants, and his fact-finding reports on the tea industry were solitary examples of their kind. Naish wrote a long account concerning, as he claimed, 'the growth and method of curing Singlo tea, what quantity I thought might yearly be procured, the cost at the place of its growth, and what were the charges etc to bring it down to Canton'.[53] He was aware of the fact that much of the tea shipped to Europe through Canton came from the northern provinces of Fukien and Chekiang, though he never mentions the Wuyi mountains which gave their name to the European corrupt version of Bohea. By conversing with one of the merchants he discovered that Bing tea was grown 'only upon one small spot of ground, the owners whereof will not suffer the servant or agent of the merchant to be at the gathering or curing of it'.

Among European companies trading in Canton, the French were the only nation to maintain some sort of permanent residency in the city, and French missionary priests who had learnt Chinese were given official permission by the Emperor in 1724 to continue their activities at the port city, though they were not allowed to travel outside.[54] European visitors to Canton had reason to be grateful to the Catholic Fathers for mediating with the authorities in case of difficulties. In this respect, the obvious advantage enjoyed by the agents of the Compagnie des Indes was apparent to the English supercargoes. When they were instructed in 1729 by the Secret Committee to try to prevent the Dutch

from obtaining their tea in Canton directly, the first thought of the supercargoes was to approach the French Chief. ' We judged this way of proceeding by conference at first with the French,' the Canton Diary records, 'to be the properest, because in all probability if our Design succeeded, it must be by representation to the Mandarins in writing translated into Chinese by the Fathers of the Mission here, among whom those of the French Nation are esteemed the most learned.'[55] However, on this occasion the French Chief refused to meddle in any such plans, as one of the Catholic priests had found himself in disfavour with the authorities the previous year, for having taken part on behalf of the English in some negotiations which had gone sour. The political mission assigned to the supercargoes in 1729 was an unusual one, which had its origin in European events. But even ordinary and routine trading involved each year lengthy and not infrequently difficult diplomatic bargaining with the port officials. The commercial system of Canton and the conditions on which the imperial court in Peking was prepared to let European companies enter China were mainly responsible for the habitual tension between the latter and the mandarins. The disputes generally arose over three traditional demands of the Chinese. The viceroy of the province of Kwangtung had instructions from the emperor that all European ships visiting the Canton river must surrender their guns, powder, and sails during the period of stay at the port. They also had to pay a series of charges ranging from a tax on the ship's measurement to customs duty on the exports and imports. Finally, the merchants of Canton were organised into official guilds or Hongs, and the Europeans were not permitted to deal with any other traders. The foundation of the Hongs and the commercial regulations were formalised in 1720, and the supercargoes of the ship *Carnarvon* noted in their diary that 'this agreement amongst the most considerable Chinese merchants of the City of Canton for the good and benefit of their commerce with the Europeans . . . was made after the most sacred manner, by going before one of their Idols'.[56] The main provisions of the agreement concerned the Hong's right to fix or determine prices of goods for sale and the standardisation of the quality. No one was allowed to trade for himself, except for small objects sold in the local markets and porcelain which required technical and expert knowledge in buying. Neither the taxes nor the commercial regulations of the Hong merchants would have aroused much opposition from the European Companies if their administration was always consistent, but quite often the supercargoes discovered that extra dues were demanded or that the mandarins tried to control the merchants and sell their own goods through them at high prices.

The East India Company's response to Chinese official demands can be measured from the instructions issued to the supercargoes from the

early years of the eighteenth century. In 1710 the Court of Directors asked them to let the Chinese know during the ships' stays in Canton that previous ill-treatment at Amoy and arbitrary tax impositions were responsible for the Company's abandonment of the northern port. The same thing might also happen at Canton if the customs chief, the Hoppo, insisted on levying the extra charge of 4 per cent on the Company's exports.[57] There is a letter dating from the same year addressed to the Company and signed by the two leading merchants of Canton, Linqua and Anqua, who recommended that the English should try to rescind the 4 per cent duty, imposed without the emperor's authority, by sending a diplomatic mission to Peking.[58] The Company had reason to distrust the two merchants for attempting to monopolise the trade of Canton and in any case it was not prepared to go beyond ordinary expostulations with the imperial mandarins. On the question of surrendering the ships' arms and sails, for example, the general feeling was that the demands must be resisted, but if really pressed the supercargoes were to deliver to the officials as usual 'a small old sail and a little powder and 3 or 4 useless muskets or cutlasses'. For this composition the mandarins would take a small present.[59] The duty of 4 per cent not only continued at Canton but was also raised to 6 per cent and eventually to 10 per cent in 1728. The protests of the European agents went unheeded. In 1731 James Naish reflected that only joint action by the Dutch, French, and the English would persuade the emperor to change his mind about the new tax rate. Admittedly, it was enforced by the late Hoppo on his personal authority, but, since the money was discovered in the official treasury after his death, the emperor had decided after 'a solemn debate' to have it paid into his chest 'under the denomination of a surplusage arising by the Hoppo's office in the port of Canton'.[60] It was not until the accession of a new emperor, Ch'ien-lung (1736-95), that the 10 per cent duty was formally abolished and the officials were ordered to revert back to the rate of dues levied during the reign of his grandfather, Emperor K'ang-hsi.[61]

In their annual negotiations with the mandarins of Canton, the servants of the trading companies were not entirely without some bargaining power. The most common leverage was to station the heavily armed ships at the mouth of the river near a point known as Boca Tigris. Only when a satisfactory agreement had been reached did the English supercargoes order the captains to bring the ships up to Whampoa, the usual berthing place in Canton. The procedure was well understood on both sides and once the vessels were within the river no force or hostility was ever contemplated.[62] The intransigent attitude on the part of Chinese officials sprang from a double conviction that European traders intended to use their naval power against the empire and that they had no real alternative to Canton as a commercial port. This knowledge

naturally increased their control over the local merchants who had little defence. In 1724 one of the English country ships from India accidentally made port at Amoy and found that the place had little trade left, as all the merchants and silk weavers had moved away. On its arrival in Canton the supercargoes of the Company who were already in the city regretted that the ship was not able to obtain its cargo at Amoy, since it confirmed the opinion of the mandarins that the Europeans were not able to carry on their trade at any other place in China.[63] Two years earlier the interference of the officials with the tea trade was mentioned in the diary as a serious disadvantage to the Company. Each officer attempted to patronise a particular merchant and through him sell tea at high prices. But the trading season of 1722 turned out to be a bad one for the mandarins. They had made large losses on their exports to Batavia, and the rumours of four large French ships arriving from Europe and South America turned out to be false. By November, the close of the buying season, the English diarist was noting that they would not send their tea to Batavia even if the Portuguese at Macao offered to ship it freight-free.[64] The principal merchant of Canton, Suqua, had managed to convince his own patron, the imperial viceroy of Kwangtung, that tea was a perishable commodity and could be a money-loser. No man in China would have believed this a few years ago, nor indeed that politically powerful people should be complimenting the despised merchants whom they used to dragoon.[65] The practice of the mandarins to engage in the tea trade seems to have declined gradually, though the merchants continued to complain of having to pay large sums to them as presents.[66]

The difficulties experienced by the East India Company in gaining access to Imperial China during the seventeenth century and the Directors' subsequent distrust of Chinese intentions prevented them from considering any permanent trading establishment in Canton. The alternative commercial arrangement under which the tea imports were to develop was the famous Council of China, composed of five to six travelling factors. Before 1715 each China ship was managed separately by its own supercargoes, but in this year the separation of individual voyages was brought to an end. When the ships arrived in Canton, all the supercargoes on board were to form a single Council, and the commercial decisions were to be taken by the members collectively.[67] The Court appointed a senior merchant who was to act as the Chief, and the others were given pre-arranged ranks. The remuneration of the supercargoes followed an unconventional approach. Unlike the covenanted servants employed in India, they did not receive a regular salary. The system of rewards had three distinct components. First, they were assigned the profits on a proportion of the Company's capital invested in China goods. Secondly, they enjoyed the liberty to carry out certain

sums in foreign silver to be exchanged for gold. Finally, they were allowed a certain amount of privileged trading both outward and inward. The various sums allocated to the Chief of the China Council in 1722 were £3000 in profit 'allowance', £1500 in bimetallic 'permission' trade, and £200 in 'privileged' investments. The most junior member received shares that were about a quarter of the ones given to the Chief.[68] In the management of its China trade the Company had clearly reverted back to an earlier form of trading known in Europe. However, the supercargoes were seldom regarded as independent agents, free to follow their own judgement on trading matters. Their commissions bound the recipients very strictly to the Company's requirements, and in our period the same supercargoes were employed on successive voyages to China, the junior members steadily working their way up the seniority scale in the Council. In the 1730s the Company divided the supercargoes into two separate Councils in order to encourage a competitive spirit and prevent informal coalitions. But in 1757 the practice of the single Council was brought back, because the Court discovered through practical experience that the competition among the Councils could degenerate into bitter rivalries in Canton and raise the price of tea.[69]

There is no question that with rare exceptions the Council of China worked extremely well as an economic experiment. The purchase of tea and the outlay of very substantial sums of money within a comparatively short trading season was not something that could be entrusted to inexperienced men. The Company was very careful in its initial choice of the supercargoes. The first-hand knowledge of the quality, taste, and the price of tea built up by them over long periods ensured that the transactions in Canton were geared to the needs of the home market. It was perhaps no accident that the Company's tea sales in London provoked the least amount of complaints from the buyers about the quality.[70] However, there were certain practical problems associated with the annual and terminal form of trading in China, which needed standard procedures. Information about the previous year's prices and market conditions in Canton was one. Supercargoes on board the outward-bound ships in any particular year would pass those on their way home at sea. It was essential to keep them informed either through letters left with reliable custodians in Canton or, as was more usual, through a long general report on the season's events deposited in Batavia. The other problem requiring guidance was the Company's own needs for tea and other China goods. The device used here was the familiar annual list of orders. The relative stability of supplies in Canton, which will be examined later, and the rising demand for tea in England made it far easier to co-ordinate the lists with the actual purchases than was the case with Indian textiles. The supercargoes arrived in China with de-

tailed instructions on the quantity of each different kind of tea they were to buy. Sometimes a price ceiling was imposed on particular varieties with their relative quantities adjusted according to the specified limits. The ship *Townshend* sailed in 1716 carrying instructions to fill up all the stowage space with tea; one half in green tea of which 10-25 piculs (133.5 1b) were to be in Bing and the rest in Singlo, the other half was to be filled with the best Bohea.[71] By 1725-6 the stocks of black tea in London were becoming unsaleable, and even Bohea was now added to the restricted list.[72] The close control exercised by the Correspondence Committee over tea buying is shown by the fact that no Bohea was imported during 1727-9 and only a very small quantity of Congo. Green tea dominated the English Company's imports in these years. A final example of the care taken in ordering tea can be seen from the following instruction given to the supercargoes of the China ships in 1740. After specifying the various quantities and prices at which tea was to be bought in Canton, the Court went on to say: 'In the Letters left for you by the last year's SupraCargoes you will see the Quantity of each sort they sent Home, which may be some guide to you to add or diminish either Green or Bohea, especially should you find a greater plenty of one sort more than the other and consequently may be bought much cheaper. But as the Prices are now in Europe it will be a very acceptable Service to the Company if you can encrease the quantity of ordinary Green or Bing Tea . . . in which case you must lessen the quantity of Bohea . . .'[73]

The first task of the supercargoes on going ashore at Canton was to establish a suitable commercial residence and to find out which of the Hong merchants were in good credit and in a position to supply the Company's requirements. The last point involved both important and delicate considerations. By contracting with men whose financial solvency was not absolutely unquestionable the agents ran the risk of defaults on tea deliveries later at a critical time when the approaching monsoon made it unsafe for the ships to delay departure, and of course there was the danger of incurring bad debts. The Company did not allow any continuous running accounts to be established with the Hongs and all balances had to be closed annually. The supercargoes of the *Walpole* arrived in Canton in the summer of 1723 to find that the losses suffered during the previous year seemed to have made all the tea merchants 'broke'. Next year, after searching inquiries, Suqua appeared to be the most dependable man to contract with, as the others were all heavily indebted to the Armenian traders. He was not only free from all encumbrances but his influence with the viceroy made it possible to extricate the Company from the consequences of a dispute with the government.[74] Suqua indeed continued to enjoy the confidence of the English supercargoes for many years, and in 1730 James Naish, who

was later to be accused of fraudulent complicity with him in raising the price of tea, described him as a man enjoying the best commercial reputation in Canton, capable of supplying goods to many ships simultaneously and punctually, though he was a hard bargainer. The merchant who denounced Naish to the Court of Directors through a private letter, Ton Honqua, also supplied tea to the Company and ironically Naish saw no reason to doubt either his ability or performance.[75] The main danger against which the supercargoes had to be on their guard was that of a monopolistic ring formed by the Hong merchants in a confined port like Canton. Even when actual rings were absent, the mutual competition among the European buyers tended to push up prices if care was not taken. The high price of tea in the early 1720s was attributed by the English agents in 1722 to the large number of European ships that were beginning to come to Canton each year.[76] As the vessels anchored at Whampoa the supercargoes immediately made their way to the city and, fearful of the subsequent arrivals and competition on the price of tea, rushed into contracts with the merchants to secure their own cargo. The result of buying tea in this fashion could be seen in a difference of 50 per cent in the price between the first ships and the last.[77] In this particular season during the period of active trading, the price of Bohea varied between 22 and 27 tales per picul. But when the English ships had taken in their ladings, the price fell to 15-20 tales.[78] This was by no means an isolated example, and the tea market of Canton strongly resembled that of coffee in Mokha in its sensitivity to the arrival and departure times of the European ships.[79]

With greater experience of the supply and demand both on Chinese and European sides, bargaining counters and recognisable positions were established in the negotiation contours which sought to avoid situations of bilateral monopoly or a feeling of dissatisfaction through too great a concentration on one side of the market. The collective organisation of the Hongs gave the Canton merchants certain power over the supply of tea. By presenting a united front they could extract price advantages from the foreign buyers and at the same time probably avoid political extortion from the mandarins, to which an individual trader would have been only too vulnerable.[80] English supercargoes approved of the latter aspect of the Hongs though not of the first. One of the reasons for Suqua's popularity with the Company's servants lay in his refusal to act in concert with other merchants. He came into prominence first in 1721 by being instrumental in breaking up a strong sellers' ring. The supercargoes noted in the Canton Diary with some exasperation that the merchants were asking such exorbitant prices for tea 'as we can by no means come into and as yet can see no probability of lowering them unless we can find some means to destroy this combination'.[81] It was broken when Suqua, together with another dealer, agreed to supply

2000 piculs of tea at much lower prices; one of the conditions of the agreement was that the contract would be invalid unless he persuaded the other members of the ring to withdraw their collective asking price. It is hardly surprising that when the Company's ships returned next year to Canton the first thing the supercargoes did was to send for Suqua 'who last year . . . signalised himself in stratagems to break the compact of merchants[3].[82] Fifteen years later he was still refusing to raise his prices on the English Company,[83] and it was not until 1750 that there was another complete deadlock over tea contracts. It occurred over the supply of green tea. Ever since 1726 the English buyers had stepped up their specialisation in the green varieties to the surprise of the Canton merchants, who traditionally ordered more black tea than green from the plantations.[84] However, no difficulty was experienced in securing the necessary supplies, and in 1729 the supercargoes observed with some sense of discomfiture that the leading tea dealers in the port possessed no less than 6500 piculs of green tea which they had bought up beforehand in anticipation of a large demand from Europe. 'The quantity of Singlo imported this year to England', it was written in the Diary, 'is more than ever was thought the port of Canton could afford, but the greediness of the merchants here to send up early to purchase it has anticipated those of the northern ports such as Chinchu *[Ckuanchow]* and Limpo *[Ningpo]* etc who used to buy it for Batavia.'[85] The finer and more expensive Heyson green tea still came down from the interior in small lots and the stocks were usually owned by many different merchants.[86] But in 1750 the Heyson dealers, in an attempt to raise prices, formed a ring and refused to sell under 50 tales per picul. The Company's ships had already bought a sufficient quantity of fine bloom Singlo tea, and the supercargoes decided to boycott the Heyson merchants.[87]

The effect of competition among European companies in buying tea had two separate aspects. The particular time at which the ships of one company arrived in Canton and the buying strategy adopted by the agents exerted a temporary seasonal influence on prices. The level of the annual range on the other hand was determined by the total number of ships expected, given a certain constancy of output. The production method in tea made it relatively independent of fluctuations associated with other agricultural crops and the total European demand in any case was likely to have been a small proportion of the internal consumption. As the tea trade in Canton was not characterised by uncontrolled entry, the supplies in the hands of the established merchants and the latter's internal calculations would interact with the total foreign demand to fix the upper and lower bounds of prices. The exports to Batavia carried in Chinese junks and the profitability of this trade was an important leader in Canton tea prices. When the English super-

cargoes suggested to the Chinese merchants in 1729 that the Dutch ships buying tea directly in Canton should be debarred from the port, they replied that most of them had relations living in Batavia who would suffer from any attempt to thwart the V.O.C. in China.[88] When the news of particularly bad sales in Batavia reached Canton, as in 1732 with Suqua alone losing 30000 tales, prices fell and the Dutch Company's competitors could buy tea comparatively cheaply in Canton.[89]

In spite of a long history of petty disputes between the Europeans and the mandarins, the relationship with the Chinese was probably happier and more cordial than with any other Asian groups. Charles Lockyer's unflattering opinion of Chinese merchants gave way later to a feeling of respect for them and they were habitually referred to as 'gentlemen' in the Company's records.[90] Deliberate frauds in the packing and blending of tea are seldom mentioned in the documents from our period. This was a point on which the Court of Directors was particularly sensitive. Any negligence in proper packing or stowing of tea chests on board the ships at once led to a deterioration in quality and depressed prices at home. There are instructions from the early years of the eighteenth century that specially emphasise the importance of not letting the tea chests come into contact with strong-smelling drugs such as camphor. The oil used in soldering the lead cannisters was another suspect in spoiling the flavour and taste.[91] The chests were stowed in the after part of the ship between decks and abaft the well in the hold. As the time for the ships' departure from Canton drew near, the Company's residency was a busy scene of weighing, marking, and despatching the chests to the waiting lighters in the river. Before deliveries were taken the different varieties of tea were inspected to check the quality; for delicate teas such as Bing which could easily turn into dust if left in contact with air for too long, selected lead cannisters were taken out unopened from the chests and small holes were cut to taste the sample tea. The holes were immediately afterwards sealed up with paper. The whole operation required considerable care and experience, and it was thought inadvisable to inspect more than 3 per cent of the Heyson and 5 per cent of the others, for fear of spoiling the tea.[92]

Porcelain

The import of Chinese porcelain during the seventeenth and eighteenth centuries was the cultural and aesthetic counterpart of the new social habits associated with the consumption of tea, coffee, and chocolate in Europe. In the logistics of the East India Company's trade with China, it had of course a humbler function. Chinaware packed in rice straw had no smell and it was an ideal complementary cargo to go with tea. Chests loaded with porcelain were extremely heavy and provided the

necessary ballast for the ships. The tea lighters could not go down to Whampoa until a groundwork of chinaware was first laid in the holds of the ships. In terms of value and share in the Company's total trade, porcelain was not of any great significance, but there was a steady demand, and there seems to have been an upper limit of £12000 which could be invested on chinaware. Its proportion in the total imports from Canton never exceeded 2 per cent, though before 1712 when the China trade was still going through its experimental period the share of porcelain could rise as high as 20 per cent. The importance of Chinese ceramics in Europe's trade with the Orient must be measured by a different yardstick. The spectacular beauty of the late products from the kilns of Ching-tê Chên and Têhua aroused as much admiration in the West as did the textile paintings of India a century earlier. Moreover, the rapid development of the porcelain industry in England, Holland, France, and Germany probably owed a great deal to the demonstration and substitution effect of the Chinese imports. The potters of Delft specialised in imitating the blue-and-white ware of the K'ang-hsi period, and Böttger of Meissen, the inventor of porcelain in Europe, was the first to copy the superb white pieces from Tehua known as *blanc de Chine*.[93] Bottger's most famous imitations are dated from about 1715, and from the middle years of the century the great porcelain factories of Vienna, St Cloud, Mennecy, Chelsea and Bow were all striving to produce chinaware in the best tradition of the oriental imports.

In the seventeenth century V.O.C. had regularly imported Chinese porcelain from Formosa and Batavia. As early as 1635 the Dutch governor of Formosa wrote to the Chamber of Amsterdam that a large quantity of porcelain had been brought over from the mainland, much more than he dared to accept, in response to the previous orders, but he assured the Directors that the samples in future would be fine and beautiful.[94] The emphasis on quality was only one side of the story, for both the Dutch and the English imported an enormous number of ordinary cups and plates which were sold off very cheaply in Europe.[95] From 1717 the English East India Company's porcelain purchases became a regular part of the Canton investment, and with the exception of 1731 when the Directors imposed a temporary ban on chinaware, the imports continued right down to the end of our period. The method of purchase followed by the Company as well as the V.O.C. was basically the same: an annual list specifying the quantities, the type of ware, sets and colours. For example, the list accompanying the ship *Loyal Bliss* in 1712 was exceptionally long and comprehensive, and enables us to reconstruct the essential features of the Company's porcelain trade at this time. The list can be analysed from three different aspects of the commercial usage of ceramics: *(a)* the utility of the ware, *(b)* the quantities, and *(c)* finally the type and colour of the decorations. It is clear that the

Company was not particularly interested in the purely artistic or decorative pieces, and in fact asked the supercargoes not to buy 'large pieces such as Jars, Beakers or great dishes or bowls'.[96] Most of the chinaware ordered falls into the twin categories of dinner services and sets for taking the three beverages. Of the first, the Company asked for 300 services each consisting of seven pieces. These were ordinary round plates, but there was also an order for 2000 six-piece sets of scallop-shell plates. Sauce-boats, three in a nest, and serving dishes numbered 4000 each, and there were similar orders for a number of small miscellaneous bowls. The high-volume orders were reserved for chocolate and tea services: 40000 chocolate cups with handles, 110 000 tea cups with matching saucers, and 6000 tea pots. The milk jugs came to 10000, and there were 2000 sets of sugar bowls with two different sizes in each set. As for the decorations, the orders were evenly divided between blue-and-white ware and the polychrome painted or enamelled pieces. There was no white ware in the list, but a number of dishes were ordered to be decorated in the Japanese style; presumably these were the *Imari* painting and glaze, developed on the island of Kyushu in Japan, which began to be copied by the Chinese pottery workers in response to Western demand.[97]

The detailed list of 1712 was intended to act as a comprehensive guide to the China supercargoes at a time when the tea-drinking and the vogue for *Chinoiserie* was rapidly increasing in Europe. However, the Court was aware of the fact that the Western preference for buying expensive porcelain in matching sets and decoration might be difficult to satisfy. The factories in China generally specialised in making one particular type of products such as cups, plates, or bowls. It was the responsibility of the porcelain merchants of Canton to see that their customers' requirements were served at the places of production. In any case, the lists on chinaware were no longer entered in full in the Despatch Books after 1720. The Court merely contented itself with issuing only a summary in the outward instructions. In 1726 the supercargoes were told that the 'chinaware must be all of useful sorts, most blue and white a few dishes, but not more than 100 sets in all, but the quantity of plates need not be lessened ... chocolate cups with handles and without, tea pots of several sorts and prices, coarse coffee cups a good quantity and other odd and useful pieces.' The newer the pattern of decoration the easier it was to sell the porcelain, and the completely white pieces of Têhua were specially mentioned.[98] The European Companies were fortunate in coming across Chinese ceramics during a period when the art of manufacture reached a new stage of refinement and invention. The popularity of the blue-and-white ware was because under Emperor K'ang-hsi the producers had achieved the height of its technical perfection. The records of the Companies were silent about the places of manufacture, but there cannot be any doubt that much of the blue-and-

white porcelain sold in Canton came from the great pottery town of Ching-tê Chên in the province of Kiangsi, near Nanking. According to Father d'Entrecolle, who lived in China during the early part of the eighteenth century, the town contained nearly one million people engaged in one way or another with the porcelain industry, and he estimated the number of kilns in the area to be 3000." The town was devastated during the wars between the Ming supporters and the Manchus, but it was rebuilt under the encouragement of Emperor K'ang-hsi in 1684 and under two successive imperial directors of the pottery works the Chinese ceramic art revivified.

The location of the porcelain manufactured around Ching-tê Chên was no doubt influenced by the supply of two very fine white clays, *kaolin* and *pai-tun-tzu,* which were fired at a temperature exceeding 120^0 C to produce the translucent china. The blue-and-white ware was the result of painting the decorative motifs with a dye paste made from ground cobalt and applying the glaze afterwards. Among the polychrome pieces imported into Europe, two new styles began to develop from the end of the seventeenth century. These were known as *famille rose* and *famille noire.* Both the decorations were based on the technique of enamelling, and the *popular famille rose* pieces were described as being decorated in foreign colours. The use of chloride of gold to produce the soft rose colour was relatively new to the Chinese porcelain painters, although after 1720 under the directorship of T'ang Ying (1736—49 (?53)) the technique of enamelling in the *famille rose* style became perfect. Porcelain made for the export market in Europe varied from the domestic production both in the shape and design of the wares. In this respect, the Chinese craftsmen showed great ingenuity in copying Western samples. The Dutch and the French seem to have taken the lead in adapting the designs, while the English buyers were quite often content to get what supplies were available in Canton provided the quality was not inferior. On arrival at the port the supercargoes inquired with the leading porcelain dealers what kind and types of chinaware were for sale. In September 1721, for example, the Canton Diary notes that samples of Suqua's porcelain had arrived in town. When inspected it proved to be particularly fine and most of the china was in complete sets. A contract was made with deliveries promised in a month's time.[100] In 1734 another contract, concluded with Kiqua, mentions that the sets of dishes and plates were made 'after the particular direction of the French last year and the blue-and-white especially seem to have had a good deal of care bestowed on them'.[101] The English agents were in some hurry to take deliveries as the supercargoes of the French ships were hourly expected at Canton. Although Chinese merchants sometimes complained that they made only small profits on their porcelain trade with the Europeans in return for a lot of trouble,

there was no difficulty in securing the necessary quantities. The quality was not uniformly good, but, provided the ships could be ballasted, the English supercargoes did not always care about the exact degree of fineness.[102] As has been already mentioned, the porcelain imports of the Company catered both to a mass market and to th€ luxury end looking for choice collector's pieces.

i8

FINANCIAL RESULTS

The general problems of private and public finance

The period from 1660 to 1720 witnessed a remarkable transformation in the commercial and financial status of London, which began to take on increasingly that indefinable institutional characteristic conveyed by the later term 'City'. The emergence of the metropolis as the leading centre of business, a concentration of 'monied interests' as contemporary writers liked to describe those with investible wealth, not only gave it a unique place in the economic and political life of the nation but also raised its status in the hierarchy of the European banking world. If the foundation of the Bank of Amsterdam in 1609 pre-dated that of the Bank of England (1694) by nearly a century and pointed to the relative English backwardness in financial matters in this period, the rapid progress made by the Bank during the first two decades of the eighteenth century also symbolised the pace of London's new commercial and economic growth. Less spectacular but equally evident was the changing position of the English East India Company in these critical years. From a condition of chronic capital starvation, the reference to which fills the pages of its court minutes during the reigns of the first two Stuart kings, the Company had reached the point by 1709 when it could subscribe a loan of more than £3 million to the Treasury and raise a similar sum in short-term loans from the public at home and abroad for its trading needs. The scale and importance of the Company's financial operations can be measured by the fact that, apart from the Exchequer and the Bank, it was the largest single corporate body in private hands, offering unimpeachable security to investors. The reputation for sound and conservative accountancy enjoyed by the Company no doubt made it easier for the Court of Directors to borrow freely from the public. But it must be remembered that at the turn of the century capital accumulation was accelerating in all probability at a national level, for the increased financial strength of the East India Company occurred precisely at a time when England had been spending very large sums of money on war expenditures. The cost of the War of the Spanish Succession (1702-13), for example, has been estimated at £93.6 million, which was preceded by a total expenditure of £49.3

million in the years 1688-97, when England became involved in major continental conflicts.[1]

The rising volume of loanable funds, which was reflected in an easing of the long-term interest rates, was not the sole indication of the greater sophistication of the London money market. Developments were taking place along a wide front, in the whole art of banking, the management of national currency, the creation of new credit instruments, and the funding of the public debt. While these new monetary features did not remove all the imperfections of the capital market, they brought into closer contact potential investors and those in need of capital for an expansion of their trade or business. Of course it can be argued that it was a lack of investment opportunities rather than an unduly low rate of savings that was responsible for creating a constraint on a greater availability of capital.[2] However, there cannot be much disagreement about the general point that in the second half of the seventeenth century voluntary savings were being more efficiently tapped in England, while the structure of taxation also favoured a certain degree of forced savings which added to the total volume of investible capital. The rise of the joint-stock companies, and the outlet provided by the East India Company in particular for funds seeking short-term interest earnings, played a leading part in the history of English public finance during this period. It was not just in the overall security and creditworthiness that the securities issued by the East India Company represented an innovation. The Company offered a clear choice to investors in the degree of risk-taking. For the public could share in the uncertainties of trade by selecting shares, the yield on which was measured by the ratio of dividend declarations to the share price, or they could invest their money in the Company's fixed-interest bonds. During the eighteenth century the latter became one of the main outlets for the temporary cash balances of the City merchants. As they were transferable by endorsement and redeemable every six months, with the option of renewal, the volume and circulation of the East India Bonds had the general effect of increasing the financial liquidity of the commercial community; it was pointed out that their ease of transferability attracted those who 'must always have those securities which they can turn into money at an hour's warning'.[3]

The evolution of the East India Company from the practices of primitive joint-stock exemplified by the terminable capital accounts of the early seventeenth century to something approaching modern company financing occurred during the two crucial decades following the renewal of its charter by Charles II in 1661. From the mid-1660s the managers of the Company tacitly adopted a policy under which the paid-up share subscriptions together with the fixed assets of the Company were looked upon as the permanent trading capital, not liable to periodical with-

drawal. The regular dividends were paid out of the current or retained profits and were in no sense repayments of the original subscribed capital. While the emergence of a free market for the Company's shares in these years underlined the transition from terminable to permanent capitalisation, the expectation of frequent dividend declarations on the part of the investors also served as a strong reminder to the Court of Committees that the financial viability of the Company still depended on an immediate distribution of profits, which would be regarded by the shareholders as an adequate return on investment. But this was a question that was not without its ambiguity, for in the commercial conventions of the seventeenth century, the calculations of profits were a difficult and uncertain exercise. There were few uniform standards such as a conventional rate of interest against which the risks and returns on particular commercial ventures could be measured. In spite of the statements made by contemporary economic experts such as Sir Josia Child, linking interest rates to trading profits, the actual ratio was far from being an uniform one.[4] The imperfections of the capital market and the slow growth of alternative opportunities for investment were strengthened by the random obstacles to trade, and the high profits of one year could easily turn into ruinous losses during another. There was also the fact that the English merchants of this period failed to keep their accounts in a form which would have allowed an easy and quick estimation of their current financial position.[5] Historians of capitalism have made much of the point that the appearance of double-entry book-keeping was partially responsible for creating the abstract concepts of profits, the firm, and its capital valuation.[6] However, as it has been pointed out in a recent study on the rate of profit in seventeenth century England, genuine double-entry accounts were comparatively rare in practice.[7] This particular criticism cannot be levelled at the East India Company. Its account books were based on an irreproachable double-entry system. The careful balancing of the current accounts, the cash receipts and disbursements, however, did not extend to capital accounting much before 1709. There were no separate headings in the Ledger Books under 'Dividends', 'Sales', or 'Interest' as became common later. Even an organisation of the size and weight of the East India Company followed only approximate methods in calculating profits during the last quarter of the seventeenth century. The unsatisfactory position was driven home in full by the committee of the House of Commons investigating the affairs of the Old Company in 1698, as the following quotation shows. 'The Committee not observing upon the Company's Books any Stated Accounts or Valuations upon which any of the said Dividends were made, only Generall Resolutions of their Court of Committees, examined the Company's Accomptant to that matter, who said that he knows of noe other Method the Company takes in their Divi-

dends than what appears by the said Books of the Courts of Committees, nor knows of any Books or Accompts wherein the Company's Stock was at any time valued or computed before any Dividend made. Whereupon the Committee being desirous of further satisfaction in this matter, and severall of the Committees of the said Company being then present. . . who informed the Committee, that they have hitherto kept noe Bookes of Valuation of their Stock, from whence they made their Dividends (but hope it will be otherwise for the future) and that upon the arrival of their ships, and calling their Accomptant, Cashier, and Book-keepers to their assistance, they make general Computation, upon which they order their Dividends.' The parliamentary report was heavily biased against the Old Company. But on the particular issue of the Company's account-keeping under capital items, it was perfectly right to complain.[8]

Apart from the management of the share capital and the dividend policy, the Committee of the Treasury had another important area of financial responsibility. This concerned the raising of the working capital for the daily running of the Company at home and the associated task of estimating and watching the level of working capital for the trading establishments in the Indies. The nominal capital of the Company, or more precisely the part that was actually called up, only provided a proportion of the total cash requirements. It was essentially a starting-up operation, and at a time as in the 1670s when the volume of East India trade was undergoing a rapid expansion the total annual outlay comfortably exceeded the total size of the share capital. Some of the money necessary for the working expenses would have come from the sales revenue; the rest was borrowed in the form of short-term loans. This method had the added attraction that the ownership and control of the Company could be kept confined to a small circle of people - professional merchants and approved members of the public. In time, the Company was forced to open its corporate doors wider and enlarge the membership; but the practice of financing a large part of the trade through debenture-type of capital continued, and the debt-management of the Company brought it very close to the functions fulfilled by a public bank. Borrowing in the local money market was not confined to London alone. It was resorted to extensively in India also in order to supply bridging finance and to tide over any shortfalls from one shipping season to another. In 1664, for example, the Madras Council was given permission to borrow up to £10000 from Indian bankers, and a decade later the factories in Bengal were regularly asked to raise local finance, sometimes by borrowing from the agents of the Dutch Company, and draw bills of exchange on London.[9] The necessity for large working capital was made acute not only by the long duration of the voyage to India and back but also by a chronic underestimation by the Court of Committee during the seventeenth century of the financial

requirements of the Indian establishments. As a result the Surat Factory ran so heavily into debt in the 1670s that at one point it virtually exhausted all its credit with the City bankers.[10] The particular problems which the Committee of the Treasury had to take into account in their borrowing policy were, first, a forecasting of the immediate size of the working capital and, secondly, the ratio of liquidity to total liability which needed to be maintained for preserving the Company's credit. References to both are to be found in the records, though no specific rule appears to have been laid down. As it will be seen later, after 1709 the Company's current cash balances in London were frequently as much as half of its total bond debt.

The financial methods and results, i6^y-i6g8

The East India Company began trading after the grant of a new charter in 1657 w^tn a nominal capital of £739782 10s.[11] The advertisement for subscriptions had appeared in October 1657 and the amount subscribed was payable in six calls, the first two being 12.5 per cent and the remaining four 18.75 per cent. The last date by which the whole capital was to be paid was fixed as March 1660.[12] Unfortunately for the new managers, business in London was extremely poor in 1659, and faced by a general lack of confidence, the Court of Committees considered it prudent to call up only 50 per cent of the subscribed capital. For the rest of the century the figure of £369891 5s appeared in all financial calculations as the original historical paid-up capital of the Company. It was the basis for dividend declarations throughout the period up to the merger of 1702, and the ownership or claims relating to these shares determined the constitutional control of the Company by providing the voting rights in the General Court.[13] The capital raised by the managers in 1659 served primarily as a foundation on which the subsequent financial operations of the Company could be built, though its small size posed immediate problems of liquidity and in the long-run created political embarrassment for the Court of Committees. It was easy for the business opponents of the East India Company to argue later that one of the largest and most powerful corporate organisations of the time had a permanent capital amounting only to a half or a third of its total annual turnover. The impression of monopolistic practices and behind-the-scene manipulations was underlined by the Company's close connections with the Crown. The foreign policy pursued by Charles II towards Holland did not always help the East India Company, but the king's continued support was absolutely essential in preserving its exclusive statutory rights in the home market. Even under the Protectorate the government had demanded a loan of £30000 in 1659 and had been lent £15000. These financial contributions to the Crown continued in

the 1660s; £10000 was lent in 1662, £50000 in 1666 and £70000 in 1667.[14]

The Company's royal loans added political weight to its financial affairs, but their true significance lay in the way that the resources of the City were being harnessed to the needs of the Exchequer. Although both the general members of the Company and the Court of Committees were still apprehensive, as they were in the first half of the seventeenth century, of the impact of Government demands on the liquidity of the Company, the adverse effects were minimised through the Court's borrowing and dividend policy. In order to conserve resources and build up working capital, no divisions were made for several years after the formation of the General Stock.[15] In the early 1660s the outward letters of the Court contain several references to the stock selling at prices below par, the 'adventurers' as it was said being disheartened by the lack of returns on their money. But this did not affect the credit and the borrowing powers of the Company, which could raise funds sometimes at rates of interest as low as 5 per cent.[16] The first dividend amounting to 20 per cent on the General Stock was declared in September 1661 and paid out the following June. By 1664 two more divisions of similar amounts had been made, making up a total of 60 per cent over a period of seven years. In declaring these dividends the Court of Committees made it clear that they did not represent a payment of capital and profits combined but were payments made solely out of earned profits. The practice had long been common with the Dutch East India Company, and its adoption by the English organisation points to the slow recognition of the separate accounting concepts of share capital, working, and fixed capital.[17] These terms were never used during our period by the accountants working for the Company. But an opportunity for making the necessary distinction came with the valuation of the assets and liabilities in 1664, as it had been laid down by the preamble to the charter. The balance-sheet showed that the net value of the Company's current assets was £495 735 6s which left a healthy surplus after the share capital had been deducted.[18]

The contemporaneous view that the valuation of 1664 revealed a considerable amount of retained profits is upheld by W. R. Scott in his statement that in addition to the dividend of 60 per cent paid out there was undivided profit of 30 per cent yielding an annual average of 13 per cent from the inception of the General Stock in 1657.[19] This conclusion was based on a misconception of the Company's true financial position, as will be seen later when we come to examine the methods and details of the subsequent balance-sheets prepared in 1671, 1678, and 1685. In the absence of annual balancing of the capital accounts, the procedure for a general valuation every seven years gave the shareholders and the management alike some guidelines on the formulation

of future financial policy, as well as an overall statement of the Company's past performance. It was a clumsy and imprecise method as an instrument of financial control and provided no indication of the real profitability of trade, but what the seven-year valuations did was to emphasise the different categories of capital and the weight of each component in the total balance-sheet. Statements drawn up by the V.O.C. during the seventeenth century on its financial position were very similar to the English ones.[20]

There was another area of the East India Company's home finances on which the example of the commercial developments in Holland exercised a decisive influence. It is well known that in the 1690s an active market in securities and bonds emerged in London, closely modelled on the Amsterdam exchange. The printed lists of share prices and the rates of foreign exchange published by John Houghton and John Castaing were one of the signs of the systematic and professional character of dealings in securities and arbitrage operations in foreign currencies.[21] But such trading was still sufficiently novel and unfamiliar for Houghton to explain in 1693: 'Actions signifie Shares in Companies . . . This buying and selling of Actions is one of the great Trades now on foot... I find a great many understand not this affair, therefore I write this.'[22] Contemporaneous economic literature on the Amsterdam bourse habitually use the French term 'action' when describing the Dutch market in shares.[23] There was a great deal of public disquiet both in Holland and England at that time about the speculative aspects of the share dealings, and the practice of short sellings was singled out for special disapproval. However, everyone agreed that the stocks of the two great East India Companies acted as leaders in the Amsterdam and London exchanges. Daniel Defoe, for example, pointed out that though there were many different kinds of private shares in the market then, it was the East India Stock that 'was the main Point'.[24] Speculative dealings in the actions of the V.O.C. first came into public notice in 1609 when a syndicate headed by Isaac Le Maire tried to manipulate their prices.[25] In 1689, after many failures to discourage time bargains and futures trading, the authorities in Amsterdam took action to regulate and tax transactions in actions. By this time the bourse had reached a high point in the art of stock jobbing, as the treatise written by Josef Penso de la Vega, a veteran dealer in shares of Amsterdam, so well describes.[26]

The principle which the private sale of East India stocks, both Dutch and English, established was a highly important one in the full development of commercial and industrial capitalism. It incorporated the notion that the fixed liabilities of firms or the state, giving rise to future income streams, can be viewed as liquid assets for individuals, the price of the assets being determined by the capitalisation of the discounted

value of the expected future payments. Capital accumulation and its productive investment was at once made possible by this process. So far as the East India Company was concerned, it marked the end of the idea that the issue of share subscriptions was only a means of financing a definite trading venture at the end of which the capital would become available for reinvestment. The ownership of the Company's stock now implied instead a permanent unit of investment with a marketable value. The fluctuations in the price of the East India shares in these early years of revival illustrate the point very well. Regular quotations of prices are not available until later in the century. But from scattered references we know that with the outbreak of the Dutch war in 1664 the Company's stock was selling at 70 and 60.[27] This fall occurred in spite of the fact that the management had declared a dividend of £40 per cent in 1665, followed by two further payments during 1666 amounting to 50 per cent. The depreciation of the East India shares can be interpreted from two different points of view. During the period of war, trading in the Indies was temporarily suspended; but the distribution of the large dividends in a period of crisis could have been seen by the shareholders as a winding-up move on the part of the Court of Committees with a redemption ceiling of only 90 per cent of the value of nominal shares. On the other hand, those who were willing to buy these shares were incurring considerable risks, reflected in the discounted value of the stock, for there was no guarantee that the English East India Company would be in a position to pay any dividends at all in the foreseeable future. All the evidence of past history pointed in the direction of the General Stock of 1657 ending up with a loss or at a bare break-even level.

During the Great Fire of 1666 the Company had lost great quantities of goods, particularly pepper, left in its warehouses in London.[28] When peace was made with the Dutch, the finances were in a depleted condition, if account is taken of the large dividend payments and the loan of £120000 granted to the Crown. But the Ledger Book dating from these years presents a different picture. Under the heading 'Money in charge of the Committee of the Treasury' the total receipts from February 1665 to December 1666 amounted to £499957, and the payments £268443, leaving a cash balance of £231514. The net balance for the period from January 1667 to March 1668 (see Table A.20) was only £97669, and there was actually a small deficit in 1668-9. However, in the shipping season 1669-70 when the value of the Company's exports to the Indies - always a sensitive indicator of its true financial affairs — increased substantially, there was a cash reserve of £324934 in the treasury with which the expansion could be financed. It would seem that the revenue from sales, together with possible borrowings, had contributed to the maintenance of the Company's liquidity. These facts must have been

Table A.20. *Money in charge of the Committee of the Treasury*

Date	Receipts £	Payments £	Balance £
Feb. 1665-Dec. 1666	499957*	268443	231514
Jan. 1667-March 1668	571182	473513	329182
April 1668-March 1669	336709	340957	324934
April 1669-Oct. 1670	249583	251803	322714
Sept. 1669—April 1671	1139821	1139821	A/c balanced
June 1671-July 1673	1806103	1799672	10333 brought forward
July 1673-Dec. 1675	2667448	2643534	34247
Jan. 1676-June 1676	484340	477916	40671
June 1676—June 1677	1174247	1558887	22427
June 1677-Dec. 1677	698168	540000	18074
Dec. 1677-Aug. 1678	431750	439684	10140
Sept. 1678-May 1679	1145266	1142929	2337
June 1679-Feb. 1680	1037611	956672	80939
March 1680-Feb. 1681	1748272	1633137	115135
Feb. 1681-June 1682	2935396	2930653	4743

Sources. General Ledger Book L/AG/i/i/vols. 2-8.
Mote. * Includes previous balance.

known to the financiers in the City, for according to the references in the Court Minutes the East India stock was selling at prices varying from 108 to 130 in 1669-70 despite the fact that no dividends were declared in these years.[29] The reason for the suspension was made clear by the Court of Committees at a meeting of the General Court in May 1671 when the stockholders were pressing the management for some return on their investment. After announcing an immediate payment of 10 per cent dividend, the directors went on to 'acquaint them that the stock had been reduced to a low level by the great dividends made in the year 1666 (through there being little opportunity to trade by reason of the Dutch War). Therefore the Court had not been capable of making any since that time, it having been found necessary not only to employ all the stock and the profit that hath arisen therefrom, but also to take up great sums of money at interest to carry on the trade, and having now by the blessing of God supplied this trade with a convenient stock and observing that the adventurers do generally desire to have something divided as soon as may be, the Court, have resolved on a dividend of 10 per cent.'[30] The wording of the announcement, that the dividend would be paid 'immediately after the sale, as money comes in', shows the close connection which still existed between the actual trading position and the financial returns. For example, the buyers of the Company's goods at the auction sales were allowed to submit signed dividend warrants as payments. Although this step could be regarded as a survival from the days when dividends were paid in goods, it was not long

before the dividend warrants of the Company were to take on a monetary role as negotiable commercial papers.

The gradual transition from one stage to the other can be followed very clearly from the history of the Company's dividend payments during the next two decades. In September 1672, it was decided at a meeting of the Court of Committees that a dividend of 20 per cent should be declared against the goods put up for auction in the autumn sales, but the warrants were not to be regarded as ready money and therefore the buyers presenting them for the purchase of goods would not be entitled to the usual discount of 6.5 per cent. Stockholders who decided to take their dividends in cash would be paid after next May, which was the last sale set for clearing the current inventory of goods. The returns from the Indies were substantial this year, and the Court had hopes that the entire dividend of 20 per cent could be paid in ready money. But the mixed system was adopted in the end, because 'the urgency of the Company's affairs calls for the issuing of all the present money that can possibly be raised'.[31] For the following years the Company continued the practice of allowing the stockholders the option of cashing the dividend warrants against goods as well as ready money. By 1679 the Committee of the Treasury was moving towards the separation of the sales customers from the owners of stocks, and the two 10 per cent divisions declared in this year appear to have been made in cash.[32] Five years later the point had been reached where dividend payments by the Company were regarded even by the management as fully discountable financial transactions. When a dividend of 25 per cent was declared in October 1685, the resolution of the Court stated that, of this, 10 per cent would be paid immediately in cash and the remaining 15 per cent in April with 5 per cent interest for the period of six months.[33] For the rest of the decade similar provisions were made for allowing interest on the amount of dividends left outstanding[34] (see Tables A21 and A22).

The main advantage of the arrangement lay in making the Company's shares more attractive to investors by increasing their negotiability. It also put them on par with the bonds which were considered since 1683 as being equivalent to ready money for the purpose of settling the sales accounts.[35] The financial conventions adopted by the Company during the years from 1670 to 1690 laid the foundation on which the more stable and advanced system of capitalisation was to be built in the next century; but even in the 1670s and 1680s, a period of relative prosperity for the Company, the actual returns on East India investments were likely to prove vulnerable to the random events of wars and external commercial depressions. It is this inherent economic instability of the age which makes the attempt to calculate exact and scientific yield on the East India stocks a dubious exercise. In any case,

Table A.21. *Prices of stock and the dividends i66i-i6gi*

Year	Prices of stock £	Dividends rate %	Date declared
1661	90-94	20	2 Sept. 1661
1663	—	10	23 June 1663
1663	—	10	11 Sept. 1663
1663	—	20	12 Aug. 1663
1664	60-70	40	3 Aug. 1664
1666	—	40	2 Feb. 1666
1668	130	—	—
1670	in	—	—
1671	—	10	5 May 1671
1672	80	20	15 April 1672
1672	—	20	11 Sept. 1672
1673	—	20	24 Nov. 1673
1674	—	20	6 April 1674
1677	245	20	19 March 1677
1677	—	20	3 Oct. 1677
1678	—	*	25 Jan. 1678
1679	—	20	20 Aug. 1679
1679	—	20	26 Sept. 1679
1680	300-245	50	8 Sept. 1680
1681	365	20	14 Feb. 1681
1682	—	50	14 Jan. 1682
1682	—	100 Stock Bonus	—
1685	500-360	25	21 Oct. 1685*
1686	—	25	14 April 1686*
1687	—	25	12 Oct. 1687*
1688	—	25	20 April 1688
1689	—	50	2 Oct. 1689
1690	300	—	—
1691	200-158	50	8 April 1691

Source. Scott, *The constitution and finance of the joint-stock companies,* II, 177-9. References to the original sources are given therein.
Note. The share prices are only individual quotations and in reality likely to vary a great deal from day to day.
*Date paid.

the motivation of investors in the share market cannot always be distinguished from expectation of income yields and short-term capital gains. Since the price of the Company's stocks was a dependent variable of the general business outlook as well as the rate of current declared earnings, the concept of an exact yield is not a very useful one given the changeability of the market. Judging from the uncertain progress of the Company's dividends and the atmosphere generated by the final Anglo-Dutch war and the 'Stop' of the Exchequer (1671-2), investment in the East India Company could not have appeared as anything other than a highly speculative venture. The extent of risk and gain can be studied in some detail from the time-pattern of the dividend payments between 1671 and 1691, after which there was no further payment until 1700.[36]

Table A.22. ***The estimated yields and value of stock at fixed interest rates***

Year (1)	Price of stock (2)	Assumed future value (3)	Assumed present value (4)	Time horizon (5)	Projected yield % (6)	Actual yield % (7)	Company's bond interest rates % (8)	Dividends paid for stated years (9)	Average annual dividend (10)	Price: earnings ratio (11)
1661-8	94	234	147	8 (1661-8)	6	12.08	6	140 (1661-8)	17.5	5.37
1668	130	270	182	8 (1661-8)	9.6	7.18	5	130 (1668-77)	13	10.0
1677	245	375	266	7 (1671-7)	6.3	9.7	5	110 (1678-81)	27.5	8.90
1681	365	475	406	4 (1678-81)	6.8	4.8	4	75 (1682-5)	18.75	19.47
1685	360	435	358	4 (1682-5)	4.84	6.83	5	175 (1686-91)	29.17	12.34
1685	360	—	—	25 (1661-85)	—	3.32	—	445 (1661-85)	18.2	19.78
1661-91	100	730	—	31 (1661-91)	—	6.62	—	630 (1661-91)	20.32	4.92

Sources. See Table 20.

Note. Col. 2, price taken from Scott, *Joint-stock companies.* Col. 3, price of stock in col. 2 + dividends paid for the preceding period (stated years) in col. 9. Col. 4, assumed present value which would give assumed future value at bond interest rate (col. 8) at the end of the time horizon (col. 5). Col. 5, the choice of the time period is given by the assumption that potential investors base their expectation on the past dividend records and project that time horizon on to the future. Col. 6, assumed future value (col. 3) is equated against the current price of stock (col. 2) and solved for the compound interest rate. Col. 7, price of stock (col. 2) + dividends (col. 9) is equated against price (col. 2) and solved for compound interest rate for stated years in col. 9. Col. 10, dividends in col. 9 divided by the number of years given within brackets. Col. 11, price of stock divided by the average annual dividend (col. 10).

From the point of view of a long-term investor the returns were exceptionally high during 1671-4, when a total of 90 per cent was distributed. Then followed a two-year break with a division of 40 per cent in 1677. Only 0.5 per cent was paid in 1678. But during the following year 40 per cent was divided; the rates for 1680-1 were 50 and 20 per cent, respectively. Thus in eleven years the Company had paid a total of 240 per cent or an annual simple average of 21.8 per cent. For the next ten years the total distributions came to 450 per cent, almost doubling the previous annual rate.

It would be wrong to conclude from these dividend payments that the East India Company's real net profits were of similar magnitude. The cessation of the divisions after 1691, if nothing else, showed that the commercial strategy followed by the Company had not been a sound one. Although the drying up of funds was primarily the result of the interruption to trade caused by the Mughal war, the distribution of very large sums to shareholders at a time when the outcome of the conflict still remained in the balance was less than judicious. But it was apparent from much earlier that the questions of the Company's true financial condition and the dividend policy were not always strictly related. When the Committee of the Treasury recommended a suspension of dividend payments in individual years, it had no firm accounting basis for the decision and was influenced by the level of current liquidity and the prospects of immediate cash inflows. This conclusion is supported both by the debates in the meetings of the Court of Committees and the methods of striking the periodical balance-sheets. The earliest of these dated 1671 revealed a net asset of £608837 after deducting all current liabilities. The statements of 1679 and 1685 were more elaborate and took into account the value of fixed capital or dead stock, but they were all based on the same method of estimation. According to the valuation of 1678 the net assets amounted to £798041, while in 1685 these had reached the impressive sum of £1703422 (see Table A.23). It was clear even to the members of the Treasury Committee that these balance-sheets were only an approximate statement of the true accounts. In 1679 after examining the various items prepared by the accountant, the Committee made the guarded comment that 'wee are of opinion that this Extract and Computation thus taken by Mr. Beyer your Accomptant General is as near the true state of your Affairs here as reasonable can be made or Expected at this time'.[37] The main defect of the balance-sheets stemmed from the fact that they were not based on actual historical expenditures and receipts over the period concerned but were merely a point estimation of current assets and liabilities.

It was impossible from these seven-year valuations to derive any accurate idea of what the average annual expenses and revenues were and consequently of the level of profits. It is evident that at a time when the

Table A.23. *Balance-sheet and the valuation of 1685*

Credit	£	s	d
Leadenhall warehouse, remains the 30 June last	182737	9	9
St Hellens warehouse, remains the 30 June last	201547	18	3
Bethlem warehouse, remains the 30 June last	89688	12	10
St Dunston's Hill	107645	3	11
Pepper in the custody of Mr Ashton	13671	5	0
Drugs	18729	9	4
Goods in the custody of the Husband	70429	5	0
Money in the treasury	34665	19	0
Pepper and drugs sold but not delivered	4265	2	6
Calicoes sold but not paid for	9349	13	4
English goods provided for India	500	0	0
Houses, leases, and good debts in England	16307	0	9
Several ships' cargo, arrived since 30 June	858657	16	4
By the Company's estate in England	1608194	16	0
By Factory at Surat	135609	13	2
By Factory at Fort St George	342722	15	6
By Factory in the Bay	286022	10	2
By Factory in South Seas	90911	12	10
By owners of several ships	23351	3	7
Total	2487312	11	3
Dead Stock £719464			

Debit	£	s	d
To several persons owing them at interest	569244	5	2
Freight, customs	175 646	0	0
Charges in India, more than the revenues and profits	4000	0	0
For interest due to several persons	15 000	0	0
For several debts owing in India	20000	0	0
Total	783890	5	2
Remains for balance of this general account being the stock belonging to the adventurers			
Dead stock £719464	1703422	6	1
	2487312	11	3

Source. Home Miscellaneous Series, vol. 4, p. 43.

volume of the Company's trade was growing rapidly, the Court of Committees looked upon sales revenue as a major source of internal finance. However, considering the large dividends made by the Company in the early 1670s, we cannot be certain to what extent the growth was based on funds obtained from borrowing or retained profits. Even as capital accounts, the valuations of 1678 and 1685 had serious defects, for the liquid resources assigned to the Asian settlements and factories as stock remaining were estimated by the Accountant General on the invoice value of the goods and treasure sent out to them and subtracted from them the total amount of goods returned. No provision was made for depreciation, the servicing of debts, or the working expenses of the factories. The accounts department no doubt attempted to keep accurate records of Asian expenditures and revenues, when the books were actually sent back.[38] But apart from the question of the necessary time-lag, there was always serious disagreement between the London officials and those in the Indies on the methods of valuation. In view of these difficulties, it would seem prudent to postpone judgement on the profitability of the East India trade until further detailed work on the accounts shows the true situation. Scott's assertion that the valuation of 1678 revealed the existence of a large balance of undivided profits, amounting to nearly a million pounds, cannot be accepted at its face value.

That the members of the Committee of the Treasury were uneasy about the Company's financial condition in 1679 is indicated by their disregard of the stock remaining in Surat, Madras, and Bantam, which contributed so largely to the total assets. Eventually, when the resources available in England from unsold goods and good debts were taken into account and compared with the total volume of debts owed by the Company, the Committee found a shortfall of more than £216000.[39] The cash position was so serious that in the opinion of the Committee at least £ 100 000 of the 'Transient Bills' must be left unpaid to enable the Company to discharge its necessary disbursements without having to borrow further sums at interest. Not surprisingly when a vote was taken at the next meeting of the General Court, there was a majority against any declaration of dividends.[40] At the same time a motion was put forward that the rate of interest paid by the Company to the bondholders should be reduced from 5 to 4 per cent.[41] The proposal was referred to the Committee for further discussion, and in April it was decided that the rate paid on all standing debts should be reduced to 4 per cent, though for fresh borrowings the higher rate was allowed to stand.[42] The practice of raising funds on short-term loans was not new to the Company, but the amount of bond debts had expanded with the increasing activity, and by 1678 the Treasury was being regularly empowered by the fuller Court to take up money on the Company's seal redeemable at periods not less than six months. There was obviously a

close understanding between the bondholders and possible lenders to the Company on the one hand and the management on the other. One of the interesting features of the Committee's borrowing policy in 1679 was to give 'preference to such as are known buyers at the Company's candle'.[43] Mutual transactions within known groups not only reduced the risk of bad debts when the Company was the creditor but also raised the general level of liquidity. It is probable that the development of the debenture type of capital represented by the permanent element of the East India Company's total bonds arose out of the easing of the capital supply in the third quarter of the seventeenth century. The renewal of the six-monthly bonds was a frequent operation, and under conditions favouring the borrower even short-term debts of this kind were acquiring the characteristics of long-term lending.[44] According to a contemporaneous economic tract published in 1677, there was no sign of any shortage of loanable funds in England during these years, and the author categorically stated that 'there is now *as much money to be let on good Securities* in England, *as there are Securities,* or rather more'.[45]

In the early 1680s the East India Company's financial history moved into a different and more disturbed stage. So far the Company had weathered the effects of the Dutch wars and the royal demands for financial support with remarkable success. However, the period of comparative calm was broken by the attack launched by the Levant Company in 1680 and the attempt to break the Company's exclusive rights to trade in the East Indies by other rival commercial groups who felt excluded from a profitable branch of English overseas trade. It was clear to the Court of Committees, and in particular the faction led by Child, that political support from the king must be purchased by the most direct means if the threat from the interlopers was to be effectively removed. When the General Court met on 5 October 1681, a proposal was made for presenting the king with a voluntary gift of 10 000 guineas. But the real facts and hard reasons for the gift were concealed behind unusually eloquent public statements. The governor informed the members that 'it having pleased God wonderfully to bless this stock (as they all know) with a very considerable increase, farr beyond any trade that is driven in Europe, to the envy of many merchants . . . the prosperity whereof, next to the blessing of the Almighty, they must attribute to the singular favour, countenance, assistance, which upon all occasions His Majesty hath been graciously pleased to vouchsafe unto them'.[46] The present had its intended effect and in November a royal proclamation confirmed the Company's exclusive privileges.[47] Until the revolution of 1688 the annual gift of a similar sum to the Crown was continued, and the Company by this step became identified with the political interests of the Stuart dynasty. The full implications of the involvement were to become apparent only in the next decade.

One of the persistent criticisms of the East India Company which came to a head in 1681 was the closed and limited ownership of its capital. Although a considerable amount of stock was held by small investors and the trustees acting for widows and orphans, influential City merchants owned very substantial proportions of shares. Child and other leading members of the Court of Committees were aware of the urgent pressure on the Company to enlarge the membership and in the famous *Treatise*, published in 1681 as a defence of the East India Company and attributed to the pen of Josia Child, it was stated that a new stock was desirable 'provided we can come honestly by it, that is, without injustice to the now Adventurers . . . and without detriment to the Kingdom in general. Which notwithstanding is a matter of great difficulty, it being in Trade, as with Trees; great care is to be taken in removing an old one.'[48] It is worth noting that what the author of the *Treatise* was discussing here was not merely an injection of fresh capital into the Company but the winding up of the General Stock of 1657 and the institution of an entirely new one in the tradition of the early seventeenth century. There is no doubt that in spite of his cautious support to the idea of a new stock, the author preferred to carry on with the old one, and he took some trouble to point out the good value of the existing East India stock. The market price of 300 compared very favourably with that of the actions issued by the Dutch East India Company, and the latter's working capital, according to the *Treatise*, was no larger than the quick stock of the English Company. Even so members of the gentry and others baulked at paying £280 for £100 shares.[49]

While the public debate on the future organisation of the East India trade continued, the Court of Committees came forward with its own plan for increasing the size of the original capital. On 2 November 1681 it was recommended that all subscribers were to pay in 50 per cent of their nominal holdings by 29 September of the following year. Anyone who paid before this date was to be given a discount of 4 per cent, but those defaulting on the call were to have their future dividends stopped.[50] In the end, nothing came of the proposal. At the meeting of 18 January 1682 it was decided instead to declare a dividend of 150 per cent. Of this 100 per cent went to double the value of all existing shares (thus doubling in turn the total nominal capital) and the remaining 50 per cent took the form of a cash payment.[51] This spectacular gesture had the effect of adding a considerable sum of money to the trading capital at no extra cost to the old shareholders, though it did nothing to bring in new subscribers. In 1698 when a parliamentary committee was looking into the financial affairs of the old East India Company, the sudden change of policy was an object of special interest to the investigating members. On being questioned as to 'what was the cause of soe great an alteration of their affaires in soe short a tyme', some of the Direc-

tors who had been in charge then replied that in those two months the Company had received information that six ships with a combined cargo of £500000 were on their way home.[52] The Committee mentioned at the same time that in 1681 the East India Company's total debts in England amounted to £613529. If there was a veiled suggestion in the Parliamentary Report that the financial manoeuvres adopted by the Company in the early 1680s were unsound or politically motivated, the justification for such thinking was not lacking. The immediate result of the doubling of stock and the dividend declaration of just 50 per cent, to be paid only nine months later, was a fall in the price of shares. The decline was aggravated by internal struggles among the members of the Court of Committees, and the sale of holdings belonging to the defeated faction led by Thomas Papillon.[53] At the end of 1682 and in the early months of the next year the quotations were 150 and 122.5 respectively for the doubled stock. The excessive turnover of shares worried the Court, and in October 1683 it was decided that after the autumn sales were over, measures were to be taken 'to prevent the exorbitant increase of Transports of Adventures lately brought into practice beyond all former precedents to the disparagement of the Stock and the excessive trouble of the Accomptant General'.[54] The depressed price of the Company's shares was not apparently checked. For in 1685 in a letter to India the Court attributed the fall to the trading losses suffered by the Company during the previous seasons and the consequent suspension of the dividend payments.[55]

The year 1683 was to prove a difficult one for the East India Company in more than one way. The financial crisis affecting the City bankers during the winter did not leave the Company untouched. Its cash reserves had been run down by very large amounts of capital sent out to the Indies since 1680, which was partly the consequence of the commercial threat from the interlopers. Even on January 4 1683, the very day that Sir Josia Child reported to the Court of a royal audience during which the king had urged the Company to pay its debts, the Committee decided that the sum of £800000 would be sufficient for financing the Indian trade in the coming season. But in order to restore confidence in the solvency of the Company, it was also declared publicly that any cash that was paid into the treasury from the previous and the March sale was to be 'wholly applied to the payment and satisfaction of such debts as are now owing by this Company and not to any other use or purpose whatever'.[56] The assurance was of course closely connected with 'a generall and unparalelled Run or Demand for money upon all the publick Funds in this City and particularly on this Company'.[57] Further announcements were shortly made for easing the liquidity crisis. The Company promised to treat all bills on itself maturing until March as ready money paid against the auction purchases and all bond-

holders who wished to renew their bonds were to receive interest at the rate of 6 per cent.[58] These special measures saved the Company from immediate bankruptcy. During the summer months the day-to-day expenses were being met from personal contributions made by the members of the Court of Committees,[59] and it was not until the autumn of 1684 that the Company managed to recover fully from the effects of the run and once again reduce the rate of interest. In September the bondholders were informed that the Company was resolved to pay off all current loans and that anyone wishing to renew his papers would receive only 5 per cent as interest. To bring greater certainty about the Company's future financial operations, the Court made a statement that the interest rate would remain unchanged for at least two years and the bonds were redeemable only twice during the year.[60]

The resumption of the dividend payments for 1685 signalled the Company's return to conditions of relative financial prosperity, even though the demand for East India goods was depressed in these years, as a result of the vast increase in earlier orders. The valuation of 1685 shows that goods worth £581617 were still in the four warehouses, while the value of the cargo in the returning summer ships was estimated at no less than £858657. Taking the net assets at *£1* 703422 the Accountant General computed the value of every £100 share at 230; the fixed capital was valued at £97 per share. The healthy state of the balance-sheet put the management in a stronger position to combat the opposition that was to come in the aftermath of the revolution of 1688. As a strong supporter of James II, who was a shareholder, the Company found the change of regime awkward for its interests.[61] In the summer of 1689 rumours were circulating in the City that the old Company was to be dissolved, and a rival syndicate was formed with sizeable campaign funds to persuade the parliament either to force the Company to issue a new subscription or to authorise the establishment of a new company.[62] In December, the East India Company replied to these efforts to weaken its rights with a petition addressed to the House of Commons. It began with a re-statement of the time-honoured argument that if the Company was abolished as a joint-stock organisation the East India trade would be lost to other European nations and with it the sovereignty of the seas. This was perhaps a delicate hint to the House, of the Dutch attempt to monopolise the spice trade and of William Ill's own connections with Holland. But the main point of the petition lay in the fact that the Company already employed more than £1.3 million as quick stock, part of which was in shares and part in bonds subscribed by its own adventurers. Nevertheless, the Court of Committees expressed themselves willing to accommodate the wishes of the House about enlarging the membership, though this was now easily achieved 'by the common way of purchasing which hath ever

been the practice both in England and Holland and which is certainly best for this Kingdom'.[63] It is a measure of the Company's financial and political strength that, until 1693, the powerful opposition in spite of its advantages was not able to bring about any radical changes either in the corporate management or in the composition of capital ownership.

The intervening years were spent in intense lobbying of both parliament and government by the two contesting sides. In October 1691 the rival syndicate succeeded in securing a vote in the House of Commons scaling down the book value of the Company's assets to £744000 and asking the Court of Committees to provide legal security for this amount. The Company at once complied with the motion. Sir Josia Child and his son-in-law Thomas Cooke, the wealthy bullion dealer in the City, between them put up £100000 of the security.[64] By this time the opposition was moving towards concrete and substantial counter-proposals, and in February the Earl of Nottingham, the principal secretary of state, accepted and published these propositions for 'Regulating the East India Company'.[65] The main substance of the plan was the subscription of a fund not less than £1.5 million and not exceeding £2 million. The capital of the present Company was to be part of the fund and was to be rated at £744000, provided the management 'can give security that it shall effectually produce that sum, or else at so much less, as they will engage to make good, after all debts paid, and satisfaction made to the Mogull and his subjects against whose pretensions, the new stock to be indemnified by like security'.[66] The syndicate had strongly impressed upon the Privy Council the financial drain on the Company caused by Child's decision earlier to wage war on the Mughal Empire and subsequent peace terms which included payment of large compensations to the Surat merchants whose ships and goods had been seized by the Company.[67] The other part of the Privy Council's reforming proposals was to restrict individual ownership of shares to a maximum of £10000. Large shareholders, such as Child and his friends, would have been effectively excluded by this measure from controlling the policy of the Company.

The reply of the Court to the government's draft regulations for the settlement of the East India trade was an essay in defiance. When the General Court of the Company met in March 1692 to consider the issue, the Court of Committees declared itself 'unanimously of opinion that the Constitution of this Company and the authorities granted them by their Charters are the same in all substantial parts as the Dutch, French, and Danish Grants, and that all of them are refined to the present system by the wisdom of severall ages'.[68] In the printed reply, the Company also pointed out that in an open market the value of everything was determined by the price and that the Company's shares were currently selling at 150. But the actual assets were worth much more

than that and the Court knew of no law or reason why they should be dispossessed of their property at any less value than it was really worth. No man was obliged to give security for his possessions, and as for the demands of the Mughal emperor the Company did not owe a penny to any of his subjects.[69] Another pamphlet, attributed to the authorship of Child, picked up the opposition's suggestion that the permanent capital of the new Company should be wound up every twenty-one years: 'This is so strange that, if it should be admitted, would make the company ridiculous all the world over; and is as much as to say a man should be obliged to plant a great orchard and remove his trees ... at the end of twenty-one years . . . The Dutch Company have spent within thirty or forty years past above £700,000 upon Ceylon and have not yet seen their principal by about £400,000 to this day; this Company have been building and fortifying at Bencolen about ten or eleven years and they must proceed in building and fortifying there for twenty or thirty years to come.'[70] The uncompromising attitude of the Company was ill-received by the House of Commons, though William III hesitated to issue a formal notice of dissolution as he was being urged by the Commons.

The deadlock was finally broken when in March 1693 the Company failed to pay the tax of 5 per cent on the value of its stock by the last stipulated date and its charter automatically became liable to forfeiture.[71] It seems highly probable that the oversight was the result of deliberate design. For in November 1693 during the debate in Court on the new charter it was mentioned that 'in or about the month of March last His Majesty was pleased to send down to the Company Heads of Regulations for increasing their Stock and for the better carrying on their trade to the East Indies, which were agreed on, submitted to, and accepted off by them'.[72] Private or semi-formal negotiations between the king and the Court of Committees may have provided an understanding on the basis of which the old charter was revoked and a new one granted later in the year. The latter was clearly a compromise; Child and his party still remained in the Company, but the way was left open for bringing in new subscribers. The amount of fresh capital that was to be added to the existing stock of the Company was fixed at £744000, and by January 1694 the Governor reported that the new subscription had exceeded this sum by 25 per cent. The charter of 1693 did not, however, satisfy the opposition, and both sides now embarked on a campaign of bribery and persuasion which ultimately ended in a defeat for the old Company. The war losses and the depleted financial condition of the latter played a large part in this reversal of fortune. No dividend had been paid since 1691 and in October 1695 it was proposed that every stockholder should pay in 25 per cent of his shares. The great losses which the Company had recently sustained 'by several of their

ships falling into the Enemies' hands' made it imperative to raise additional capital from the adventurers 'for setting out the next year's shipping, supporting their credit, and carrying on their trade'.[73]

The East India Company was not alone in suffering these financial disasters. The Levant Company, the Royal African Company, and the English sugar merchants were all caught up in the adverse conditions created by the Nine Years' War,[74] but the long simmering dispute over the capital "structure of the Company came to a head and remained as a major divisive factor in the commercial life of London during years when the interruptions of war were probably causing capital to accumulate in the hands of merchants and investors. The enormous burden of war remittances and the absorption of funds by government borrowings were made possible by an apparent surfeit of savings. The same symptoms could perhaps be seen also in the struggle for the enlargement of the East India stock, the foundation of the Bank of England, and the ease with which the rival new East India Company's £2 million stock was subscribed in 1698. The connection between the war and idle mercantile capital was noticed by John Houghton, who wrote in June 1694, 'A great many Stocks have arisen since this War with France; for Trade being obstructed at Sea, few that had Money were willing it should be idle, and a great many that wanted Employments studied how to dispose of their Money, that they might be able to command it whensoever they had occasion, which they found they could more easily do in Joint-Stock, than in laying out the same in Lands, Houses or Commodities.'[75] The hypothesis of dwindling commercial opportunities of the 1690s is all the more plausible as an explanation for the crisis in the management of the East India Company, because the long-term returns on Asian trade were quite modest and in any case no profits were earned since 1691.

It is true that the East India trade had a different cost-benefit yardstick than was usual with commercial ventures nearer at home. It was always regarded in the light of an exceptionally long time-horizon, and its benefits were measured from a national standpoint. Equally, professional merchants in charge of the management had opportunities for making money from the Company's trade other than the mere dividends on their stocks. As we have already seen, throughout the latter half of the seventeenth century the Company gave special preference to those stock- and bondholders who were also its customers at the auction sales. The fast-growing English re-export trade in Asian and other tropical imports must have appeared attractive to enterprising traders in search of fresh openings for their accumulating capital. What did the East India Company offer to the purely passive investor? The fixed-interest bonds of course reflected a rate of return associated with complete security and a high degree of liquidity.[76] The yield on this type of

investment was likely to have been as near to the notional market rate of interest as the contemporaneous conditions permitted; but the returns on the East India stocks were another matter. Here the normal risks and fluctuations in trading profits were compounded by possible variations in the price of shares. As a result the yield and the attraction of investments in the Company's stocks would be a double function of the average past dividend declarations and the point at which the purchase was made. Sir Josia Child stated in his major work on economic theory that 'no man in his wits would follow any Trade whereby he did not promise himself 14 or 12 per cent gain' when the interest rate was 10 per cent.[77] As the *Discourse* was published in 1693, he had ample opportunity of testing the validity of this categorical statement against the earnings history of the Company in which he had such strong interests. The calculations presented here, made on the basis of figures given in Table A. 2 2 prove that Child was speaking more of human expectations than of hard facts. It will be seen from Tables A.21 and A.22 that there was a considerable margin of variability in the projected and actual yields during the period from 1660 to 1691. Between 1660 and 1691 an original investor purchasing stocks at the nominal price of £100 would have had an annual return of 6.62 per cent (compound interest rate).[78] The average yearly dividend rate was 20.32 per cent giving a price to earnings ratio of 4.92. The period of the highest yield was 1661-8. An investor buying at 94 would have realised an annual return of 12.08 per cent in 1668. The figures also show that except for the years 1660-8 and 1678-81 the actual yields for the stated time-length were better than the projected yields. An alternative way of measuring the risks and the profitability of investing in the Company's stocks is to calculate the present value of shares by taking the current or the bond interest rates. These calculations are highly suggestive. In 1668, for example, stocks selling at 130 should have been worth 182 if interest is compounded annually at 5 per cent against an assumed future value of 270 eight years later. The difference between the actual market price and the assumed value at the going rates of interest indicates the investor's risk and profit expectation. It is also significant that in 1677 the margin had narrowed to only 21 points; for this was a decade that was an unusually active one for the Company's trade in general with large dividends paid in the earlier years. However, the subjective nature of our yield calculations is evident when we examine the assumptions on which they are based. For example, in 1685 an investor paying 360 for his stock could expect a yield of 7.16 per cent on the basis of the Company's dividend history during the previous six years. However, if the period were extended to 25 years and all the dividends paid since 1660 were taken into account, the yield would have been no more than 3.32 per cent. Similar variability could also result from changes in the price of stocks.[79]

Struggle between the Old and the New Company, the merger, and the union 1698-1709

By 1696 the political tactics of the London merchants opposed to the old Directorate of the East India Company had changed from a desire for participation in the management to one seeking an outright demise of the old and the establishment of a new company. The bitterness of the struggle that followed is revealed by the enormous sums of money spent by the Old Company in attempting to stave off a complete dissolution. When cross-examined by a parliamentary inquiry in 1695, Sir Thomas Cooke was unable to account for £200000 cashed by him from the Company's treasury and the suspicion of 'secret service money' immediately attached to this transaction.[80] The shares of the Company were being quoted as low as 37 in 1696, a year during which all commodity prices rose at an inflationary rate because of the clipped coins. In a financial sense, the Old Company was discredited, and the opposing syndicate could easily have taken it over by open purchase of stocks in the market, assuming that there were enough stockholders willing to sell their shares. That they did not do so points to the difficulty of ousting the existing management of an organisation that had long experience of a complex and distant trading behind it and was in control of extensive overseas settlements and personnel. It is doubtful whether without the aid of a crisis in public finance, the New East India Company would have succeeded in obtaining its legal charter. For in July 1698 the Governor of the Old Company informed the Generality that in spite of every effort to prevent it, parliament had passed the 'Act raising a sum not exceeding two million, upon a Fund for payment of Annuityes, after the rate of £8 per cent per annum, and for settling the Trade to the East Indies'.[81] Formal notice was served on the Company that its charter would terminate in 1701. There were now not only two separate legal organisations trading to the Indies, but the Old Company had also subscribed £315000 to the £2 million subscription of the New Company. The legislation of 1698 unambiguously spelt out the link between government and corporate finance. The exclusive rights of the East India Company were upheld by the state in return for a loan of £2 million to the Exchequer. What this meant in practice was that the shareholders received a government guarantee of 8 per cent on the par value of stock and the management was given the legal right to raise the Company's real trading capital by issuing fixed-interest, short-dated bonds. Provided the public had sufficient confidence in the banking function of the Company, this arrangement provided an ideal balance of interest between the government and the City merchants.

If the implication of the new Act was clear to the eager subscribers in the summer of 1698, the difficulties met by the new Company in bor-

rowing a sufficient amount of working capital during the next three years underlined the actual commercial situation. In August the Directors of the Old Company made their famous remark that 'our joints are too stiff to yield to our juniors' and that as veteran soldiers in the game they expected another two or three years' strife which would end the controversy once for all.[82] Later events were to prove that this confidence was justified even though the financial condition of the Old Company was at a low ebb. For in November Thomas Papillon, acting on behalf of the New Company, made an overture for an accommodation, and in 1700 the parliament itself agreed to continue the Old Company as a corporation after 1701.[83] While active negotiations were going on behind the scene about a possible merger between the two rival organisations, the old Company took steps to improve its capital position. A call of 25 per cent was made on the shareholders in November 1699 and it was proposed that anyone paying £100 into the treasury would receive a bond worth £103 and the normal rate of interest.[84] These financial measures, it was hoped, would enable the Court to raise the necessary £500000 for prosecuting the Indian trade vigorously, and the Council in Bengal was requested to borrow money from the Indian bankers in order to keep the investment on goods moving.[85] A recovery in the price of the Old Company's shares seems to have taken place at the same time, and in April 1700 the Court was able to announce that, after the ships had been despatched to the Indies with stock and the king's customs paid together with the bills of exchange drawn on the Company, there would remain in the treasury a surplus of about £100000. A dividend payment of 6 per cent was recommended in view of the general expectation on the part of the stockholders, and a week later it was amended to 10 per cent.[86]

With the gradual return of confidence and a recovery in the level of trading, the Old Company was able to reassert its authority as the senior body of East India merchants. In India the servants of the New Company had to some extent undermined its standing with the ruling authorities. But they were not able to evict the staff from their controlling position in Bombay, Madras, and Calcutta. The relative weakness of the New Company in the area of trade itself may help to explain its willingness to consider a merger, which was negotiated by Sir Basil Firebrace in 1702. But before the Indenture Tripartite was executed, a climate of pressure had been built up by the tactics of the Old Company. An offer was made in May 1701 to pay off the entire £2 million loan and reissue it in its own name at 5 per cent interest rate instead of the current 8 per cent.[87] The move was preceded by an organised run on the Bank of England which was banker to the New Company. The conclusion of the long-drawn out struggle lasting over twelve years was a victory for neither party, and the final terms of the merger merely con-

firmed the stalemate. The financial provision of the Indenture Tripartite and the subsequent accounting agreements leading up to the award of Godolphin (1708) incorporate very complex calculations of the capital positions of the two Companies. But at the heart of the merger was an agreement to equalise the holdings of the respective organisations in the £2 million loan and an undertaking not to trade separately for seven years.[88] The management was to be vested in a Court of Managers drawn from the two Companies, and at the end of the seven-year period the Old Company was to be dissolved, its half a million stock returned to the individual shareholders, and the New Company re-named the United East India Company.[89] When all the separate accounts were finally closed in 1708, the United Company was authorised to increase its stock by £1200000 in the form of bonds at 6 per cent. It was also stipulated that a similar sum was to be lent to the government without interest, thus reducing the effective rate from 8 per cent on the £2 million loan to 5 per cent on the consolidated sum of £3.2 million.[90] In April 1709 the new Court of Directors wrote to the Madras Council that the new loan was the price the United Company had to pay to obtain its exclusive charter.[91]

The balance-sheet, capitalisation, and the calculation of profitability 1J09-1J60

One of the striking results of the Union of 1709 was an immediate improvement in the Company's account books. During the period of strife and subsequently under the Court of Managers, the accounts department was greatly disorganised. The constant transfer of stocks, the valuations of assets, and the separate running accounts of voyages interfered with the routine work of the book-keepers. In these middle years, the regularity and the standardisation of the entries which characterise the earlier and later account books are conspicuously absent. But with the creation of the new joint-stock capital, and the clear separation between the state loan and bond debt, the Accountant General was able to devise new entry headings which sought to distinguish the current account from the capital. The individual entries were balanced every two or three years and each set of books was closed at an interval of seven years. The same ease of access that allows the historian to reconstruct the East India Company's annual balance-sheet in the post 1709 period must have also given its accountants and decision-makers much greater control over the daily transactions. The years of instability and the experience of periodic liquidity crisis had left their mark, and the financial policy of the Court of Directors following the union was reformulated on the lines of rigorous orthodox accounting principles. Definite guidelines were established on the optimum size of the bond debt, the rate of interest and dividend payments, and most important of

all the ratio of cash reserves to total liabilities. Although the Accountant General still paradoxically failed to produce an annual balance-sheet, he had all the necessary information ready at hand in the Ledger Book, and it is possible that he may have supplied the Chairman and the Gommittee of the Treasury with half-annual statements, before the dividend declarations, for their private information. The desire for accurate and up-to-date facts was very strong with the new managing committees. In 1716 three committees - those of Correspondence, Buying, and the Treasury - jointly requested the Court of Directors to sanction the appointment of a special officer to audit the account books of the Asian settlements 'that he might be able on all occasions to lay before the Court or Committees from time to time a true state thereof and of their Ballances'.[92] These papers have now disappeared along with the minutes of the subcommittee, but the Ledger Books provide a complete picture of the general financial affairs of the Company's central office in Leadenhall Street. The present detailed calculations on the annual position (summarised in Tables A.24-A.26) reflect the dramatic improvement in the Company's finances from the second decade of the eighteenth century, though they also bring to light a surprisingly large degree of fluctuations in the total and percentage rate of profits.[93] The vexed question of the actual rate of earnings in a branch of trade that was looked upon traditionally as a rich area of commercial opportunities can be answered from the tables with a fair extent of certitude.

The union of the two Companies came at a time when the cumulative effects of the War of the Spanish Succession, particularly the severe bullion shortage, were still being felt by the commercial community of London. The Company had declared modest dividends in 1709, but the Court did not consider the overall financial situation satisfactory, and a call of 12.5 per cent was made on the shareholders. The actual amounts raised in this way during 1710-11 were £392435 and £324554, respectively. Arrangements were also made for borrowing £120000 from the Bank of England.[94] In fact, the Company maintained a permanent account with the Bank in this period, and the provision of short-term credit and the supply of a large proportion of the bullion shipped to the East were among the main transactions between the two institutions. The general principle on which the Company's trade and finance was conducted in the second half of the eighteenth century can be best understood if we take a brief look at the chief headings under costs and receipts and capital accounts for the opening year 1709-10. Among the items making up the total current cash outflow, the most important were the payments for export goods, treasure, freight payments on shipping, customs, and the bills of exchange drawn from India. In 1709-10 the share of these in the total cost of £473727 was 94.1 per cent. The rest was accounted for by salaries paid to servants in Asia and at home,

Table A.24. ***Costs and receipts (in £ sterling)***

Year*	Cost goods (1)	Treasure (2)	Freight (3)	Fixed charges (4)	Misc. charges (5)	Customs (6)	Bills of exchange (7)	General misc. (8)	Total cost (9)	Sales receipts (10)	Misc. receipts (11)	Total receipts (12)
1710	85488	13561	I39097	10477	17666	195627	11811	0	473727	806149	19884	826033
1711	202728	66663	148473	11618	14597	311461	8739	0	764279	1244298	46734	1291032
1712	139 739	12612	194154	10908	15222	301852	18839	0	693326	1287186	52604	I339 790
1713	97931	2839	999i6	7650	11612	320671	11047	0	551666	1223071	30839	1 253910
1714	73080	134924	290348	12089	5601	334771	952i	0	860334	1 146598	133294	1279892
1715	68624	351563	128525	10884	7881	334199	14491	5663	921830	1504172	43538	1547710
1716	53883	397913	100645	11635	3848	269134	26446	7740	871244	1277597	65623	1343220
1717	51533	554728	110150	17516	6817	418142	25368	0	1184254	1257374	46339	1303713
1718	80167	564763	102572	13458	6402	353 734	35950	2463	1159509	1002 966	71942	1074908
1719	101019	707841	126803	15321	8496	482581	71993	7152	1521206	1585530	121640	1 707170
1720	114277	546598	133 728	21213	8520	375991	111144	29942	1341413	1636526	82549	1 7I9075
1721	20796	606 145	76211	14962	4187	392872	36110	117 734	1269017	1467958	69280	1537238
1722	208439	635826	220535	13981	24077	589846	63 141	54286	1810131	1493822	50365	1544187
1723	113813	543315	191316	18508	7813	541002	92 100	i6347	1524214	1619517	56701	1676218
1724	109194	434591	135 787	14074	5712	538641	93432	0	1331431	153i 651	85586	1617237
1725	83976	606531	150948	12612	5937	525631	90467	21810	1497912	1758365	46095	1 804460
1726	73594	524099	74239	15003	3282	367550	59040	0	1116807	1332264	43 336	1375600
1727	68519	485345	115030	17003	5982	466441	50258	12 549	I 221 127	1554995	38178	1593 173
1728	90601	440049	156070	15977	12 995	339i83	43144	46164	I 144183	1771414	42276	1 813690
1729	88692	5i1323	254 176	13522	4132	577356	51885	0	I 50I086	1982 838	63495	2046333
I730	110842	628004	160575	16323	7206	429100	124571	53053	1529674	I9773II	47247	2024558
1731	122087	496399	101013	19994	7621	386607	87921	19377	I24IOI9	1536172	60890	1597062
1732	116756	431012	131356	20583	4614	3796i3	122392	0	I 206326	1482 152	66353	1548505
1733	125242	395649	199535	14699	24297	301279	139710	8696	I 209 IO7	1235677	100379	1336056
1734	110 744	49317	67436	16000	23458	369042	169487	32828	838312	1510911	20333	1531 244
1735	110736	140388	242 382	18512	19323	340170	212582	30580	II14673	1481941	32122	1514063
1736	162281	377959	160207	14375	23201	459 757	168041	92996	I4588I7	1592 269	48943	1641212
1737	154444	530526	223722	15316	27121	385422	105298	305	I 442154	1547375	63613	1610988
1738	183833	479252	268914	14488	24985	384867	166155	10315	I532 809	1518855	95719	1614574
1739	148692	556649	75629	I34I4	19354	328650	147248	61 155	I 35079I	1489938	16929	1506867
I740	116852	341928	I753I5	14038	22083	447289	186927	107786	I4I22I8	1 782516	47865	1 830381
1741	234764	5305I9	106309	12209	39IO5	356 700	153059	22935	I455600	1587515	16450	1603965
1742	I50534	49i124	236491	16171	29201	3935IO	136707	46890	I500628	1697981	20538	1718519
1743	250293	5I77OO	258678	12460	26528	447868	145520	0	1659047	2 002 636	44865	2047501
1744	207996	555345	35948i	16215	29222	427173	181379	0	I 7768H	1691 704	108327	1800 031
1745	201009	426426	221011	14490	29568	385335	104400	421293	1803532	1 805 133	40941	1846074

Sources. India Office Records, East India Company, General Ledgers, L/AG/i/i/vols. 12-18. (For methods of calculations see separate notes, p. 441.)
Note. *July 1709 to June 1710 = 171 o.

Table A.25. *Capital transactions {in £ sterling)*

	Repayments				Receipts					
Year	Bank overdraft (1)	Bond repayments (2)	Interest charges (3)	Total capital payments (4)	Bank borrowings (5)	New bond debt (6)	Exchequer bills (7)	Total capital receipts (8)	New share capital (9)	Dividends (10)
1710	0	0	208184	208184	50816	45960	143675	240451	392 435	265657
1711	0	428726	211557	640283	79000	0	165980	244980	324554	400964
1712	0	0	180783	180783	64440	163212	I457I5	373367	67965	179066
1713	0	211445	187303	398748	91839	0	131839	223678	5239	314814
1714	113274	145107	184328	442 709	0	0	136240	136240	404	318539
1715	I55505	15 166	165482	336i53	0	0	183878	183878	0	244424
1716	3718	107 189	160006	270913	0	0	128492	128492	0	316239
1717	12 138	0	I39I9I	151329	0	454534	124558	579092	0	314654
1718	4499	0	139723	144222	0	484445	128892	6i3337	0	316168
1719	0	135351	131 in	266462	181933	0	133 770	315703	0	321573
1720	191 182	0	155123	346305	0	47955	143609	191564	0	317936
1721	0	30790	152 794	183584	359107	0	172 703	531810	0	316769
1722	189104	0	155248	344352	0	335939	352648	688587	0	313002
1723	62605	0	168080	230685	0	99572	166053	265625	0	286791
1724	0	0	I752I4	175214	82567	0	149i77	231744	0	258073
1725	81256	0	158535	239791	0	36	159708	159744	0	254929
1726	0	94i	136650	I3759I	98763	0	164996	263 759	0	263909
1727	10708	0	174041	184749	0	22	162 991	163013	0	252 757
1728	320287	11	169695	489993	0	0	161268	161268	0	253 105
1729	428	25224	138309	163 961	0	0	153587	153587	0	255 755
1730	0	226 708	I43 703	370411	0	0	150998	150998	0	256442
1731	200025	141682	122209	463916	I20000	0	113037	233037	0	257 748
1732	0	10525	130864	141389	100 000	0	128000	228000	0	255366
1733	482 752	6534	140152	629438	0	425200	128000	553200	0	233209
1734	402 295	287	105467	508049	0	0	128000	128000	0	219588
1735	564065	166	118702	682933	0	0	128000	128000	0	225679
1736	0	200	119633	119833	119000	0	128000	247000	0	223836
1737	110410	2 642 646	482862	3235918	0	2985720	128000	3113720	0	223858
1738	0	350922	124182	475 104	27689	390380	128000	546069	0	215785
1739	0	33651	99648	133299	80312	33 750	128000	242 062	0	227763
1740	20000	5890	101250	127140	0	5950	128000	I33950	0	223650
1741	0	2 430	105303	I07733	20000	2 430	128000	150430	0	222863
1742	0	I800	100299	102099	0	I800	128000	129800	0	221466
1743	0	400	100431	100831	0	0	128000	128000	0	226037
1744	0	3250	103122	106372	0	3250	128000	131250	0	239367
1745	0	0	in 251	111251	0	62000	143000	205000	0	254420

Source. See notes to Table A. 24.

Table A.26. ***Financial results (in £ sterling)***

Year	Total profits (1)	Profits after div. (2)	Cash balance (3)	Earnings I (4)	Earnings II (5)	Plough back (6)	Share capital (7)	Royal loan (8)	Total bond debt (9)	Rates of profits % (10)
1710	352 306	86649	5"35i	144122	287797	22 140	3163200	3200000	3349IO5	11.1
1711	526753	125789	55040	3I5I96	481176	80212	3163200	3200000	2920387	16.7
1712	646464	467398	727947	465681	611396	432 33O	3163200	3200000	3083599	20.4
1713	702244	38743O	217599	5I494I	646780	331966	3163200	3200000	2872154	22.2
1714	419558	101019	—205046	235230	371470	52931	3163200	3200000	2727047	13.3
1715	625880	381456	229181	460398	644276	399852	3163200	3200000	2711881	19.8
1716	471976	155 737	13316	3 " 97O	440462	124223	3163200	3200000	2604692	14-9
1717	119459	—195195	232568	-19732	104826	—209828	3194080	3200000	3059226	3.7
1718	—84601	-400769	68346	—224324	-95432	—411600	3194080	3200000	3107671	-2.6
1719	185964	-135609	-86368	54853	188623	— 132950	3194080	3200000	2972317	5.8
1720	377662	59726	-95015	222539	366148	48212	3194080	3200000	3020274	11.8
1721	268221	-48548	299678	115427	288130	-28639	3194080	3200000	2989484	8.4
1722	-265944	—578946	—234711	—421192	-68544	-381546	3194080	3200000	3325423	-8.3
1723	152004	-134787	—99847	—16076	149977	-136814	3194080	3200000	3425175	4.8
1724	285806	27733	84263	110592	259 769	1696	3 194080	3200000	3425176	8.9
1725	306548	51619	—28428	148013	307721	52 792	3194080	3200000	3425210	9-6
1726	258793	— 5116	121052	122 143	287139	23230	3194080	3200000	3424269	8.1
1727	372046	119289	97553	198005	360996	108239	3 194080	3200000	3424291	11.6
1728	669507	416402	87677	4998i2	661080	4O7975	3 194080	3200000	3424280	21.0
1729	545247	289492	279118	406938	560525	304770	3194080	3200000	3399O56	17.1
1730	494884	238442	19029	35i 181	502179	245 737	3194080	3200000	3172348	15-5
1731	356043	98295	— 132584	233834	346871	89123	3194080	3200000	3030666	11.1
1732	342 179	86813	173424	211315	339315	83949	3194080	3200000	3020141	10.7
1733	126949	— 106260	-182498	— 13203	114 797	—118412	3194080	3200000	3013607	4.0
1734	692932	473344	93295	587465	715465	495877	3194080	3200000	3013320	21.7
1735	39939O	173711	—381222	280688	408688	183009	3194080	3200000	3013 154	12.5
1736	182395	-41441	85726	62762	190762	-33074	3194080	3200000	3012954	5-7
1737	168834	—55O24	—177222	—314028	— 186028	—409886	3194080	3200000	3356028	5-3
1738	81765	— 134020	—63055	-42417	85583	— 130202	3194080	3200000	3395486	2.6
1739	156076	-71687	37076	56428	184428	— 43 335	3194080	3200000	3429236	4-9
1740	418163	I945I3	201323	316913	444913	221263	3194080	3200000	3429296	13.1
1741	148365	-74498	— 31801	43062	171062	—51801	3423065	3200000	3429296	4-3
1742	217891	-3575	24126	H7592	245592	24126	3194080	3200000	3429395	6.8
1743	388454	162417	189586	288023	416023	189986	3194080	3200000	3428896	12.2
1744	23220	-216147	— 191269	—79902	48098	— 191 269	3194080	4200000	3428896	0.7
1745	42 542	—211878	-118129	-68709	74291	—180129	3194080	4200000	3490896	1-3

Source. See notes to Table A.24.

Notes on Tables A.24-26

The main purpose of compiling these tables was to provide time-series for testing the econometric model of the East India Company's trade, which accounts for the choice of the terminal dates. At the same time they of course enable us also to see the overall financial position of the Company. As has been said before at the beginning of Chapter 5, the Court of Directors, unlike modern business organisations never prepared annual balance-sheets, though privately the Company's Accountant General made his own calculations on the financial indices in order to keep a check on the profitability of trade. The tighter financial control exercised by the Accounts office after the reforms of 1709 is revealed by the practice of creating separate entries in the Ledger Books under 'dividends', 'interest', 'Exchequer bills' and so on. From these entries it was relatively an easy task to prepare statements relating to the overall current and capital accounts. The method of reconstruction used here is essentially based on these entries in the Ledger Books.

Table A. 24: *Costs and receipts*

The twelve columns in this table are derived by summing a number of subsidiary headings which are not shown here. These again were compiled from more disaggregated entries in the Ledger Books. Each account in the table represents basically the net cash paid out or received by the Company for the year from July to June. To simplify the accounts, however, some accounts have not been treated separately but considered as cash where they occur in the major accounts, e.g. private trade, individuals' and captains' accounts, charges under dying of cloth for export, packing, woollen cloth merchants, lead merchants, and shipowners. This is justified as these accounts adjusted to and always lead to the payment of cash or its receipt. The exact items under the various columns are given separately in a table.

Table A. 25: *Capital transactions*

Columns 1-3 in this table represent the repayment of capital sums by the Company. Col. 4 (Total capital payments) is derived by summing the previous three columns. Cols. 5-7 give us the capital receipts, but it should be noted that col. 5 (Bank borrowings) comprises the short-term overdrafts of the Company from the Bank of England while col. 6 (New bond debt) represents the creation of new debenture capital. Col. 7 (Exchequer bills) constitutes a net capital inflow, as these are payments of interest by the British government on the loan °f £3*2 million made by the Company to the Treasury. Col. 8 (Total capital receipts) is simply an aggregate of cols. 5-7. Col. 10 is the payments of dividend to the shareholders.

Table 26: *Financial results*

There are three columns in this table which represent new information, i.e. col. 7 (Share capital), col. 8 (Royal loan), and col. 9 (Total bond debt). Each figure is the net amount outstanding at the close of the accounts in June. The other columns are derived from Tables A. 24 and 25. The methods of calculation are given separately.

The method of constructing Table A. 24: *Costs and receipts*

Column	Source	Items
Col. 1	is summed from the following charges under	Broadcloth Long ells Stuffs General merchandise Iron Lead Tin and copper
Col. 2	is summed from the following charges under	Silver Bullion merchants Gold
Col. 3	is summed from the following charges under	Freight
Col. 4	is summed from the following charges under	Factors and servants Gratuities Salaries Presents Rents
Col. 5	is summed from the following charges under	Charges in India Charges general
Col. 6	is summed from the following charges under	Customs duty paid to the government
Col. 7	is summed from the following charges under	Bills of exchange drawn from Fort St George Bills from Bengal Bills from Bombay Bills from Fort York, Sumatra Bills from St Hellena
Col. 8	is summed from the following charges under	Other miscellaneous items debited
Col. 9	is summed from the following charges under	Columns 1-8
Col. 10	is summed from the following receipts under	Revenue from sales
Col. 11	is summed from the following receipts under	Drawback on customs Discount Charges of merchandise
Col. 12	is summed from the following receipts under	Cols. 10-11

Methods of constructing Table A. 26: *Financial results*

Column	Item	Definition
Col. 1	Total profits	= col. 12, Table 24—col. 9, Table 24
Col. 2	Profits after dividend	= col. 1, Table 26 — col. 10, Table 25
Col. 3	Cash balance	= (col. 12, Table 24 + col. 8 + col. 9, Table 25) — (col. 9, Table 24 + col. 4 + col. 10, Table 25)
Col. 4	Earnings I	= col. 1, Table 26 — col. 3, Table 25
Col. 5	Earnings II	= (col. 1, Table 26 — col. 3, Table 25) + col. 7, Table 25
Col. 6	Ploughback	= (col. 2, Table 26 — col. 3, Table 25) + col. 7, Table 25
Col. 7	Share capital	as given in the Company's account books
Col. 8	Royal loan	as given in the Company's account books
Col. 9	Total bond debts	The net amount outstanding at the end of June each year, calculated from the Company's Ledger Books
Col. 10	Rates of profits	$= \frac{\text{col. 1, Table A. 26}}{\text{col. 7, Table A. 26}} \times 100$

Directors' fees, presents, rents, and charges in India. It is clear that the overheads on the East India trade had by this time become very small, and the main source of instability in the level of costs came from variable costs. On the side of receipts, there were just two principal headings, sales revenue and miscellaneous credit items such as customs drawback, discount on goods sold for private trade, and charges for handling such sales. By subtracting the total cash outflow under the various items just described, we can of course determine the total net profits arising from current trading position. In 1709-10 the profits amounted to £352306. Out of this sum £265657 was distributed in the form of dividends, leaving a surplus of £86649. On a nominal capital of £3.2 million the net profits give a return of 11.1 per cent, from which the Court decided to give 8.3 per cent to the shareholders. Leaving aside the question of the previous cash balance brought forward, a current reserve of £86649 was clearly too small to provide sufficient liquidity for the next trading season and for meeting any possible sudden demand from bondholders for encashment. This explains the reason for the Court's call on the shareholders for a substantial payment of new capital. We can see from the capital transactions that the Company was increasing its net short-term borrowings in this year. On the debit account the total interest charges on the outstanding debts came to £208184. As against the capital outflow the Company borrowed £50816 from the Bank of England and increased the bond debt by £45960; together with Exchequer bills of £143675 on the government loan, the total capital receipts amounted to £240451. The result of summing the three net balances (profits after dividend, the net capital receipts, and the new share capital) was a cash reserve of £511351.

It must be realised that the amount of cash available in the treasury at any particular point of time would be a function of daily cash inflow and outflow. The Cash Books of the Company, balanced monthly, showed the accountants what the current position was and what financial measures needed to be taken. Even so, a total net balance in excess of half a million which appears at the end of the accounting year in June 1710 must have put the Company's finances on a sound footing. The large initial reserve was the foundation supporting the superstructure of the Company's credit and all financial moves for the rest of our period, and even in years when the net cash surplus turned negative the balance accumulated previously remained healthy. For example, the year 1712 began with an atmosphere of crisis and the dividend payments for 1711-12 were exceptionally small (5.6 per cent).[95] During the previous year the Company had paid off £428726 of the bond debt. But the net borrowings from the Bank and the capital market were increased in 1712, which led to an enormous increase in the cash reserves (£1294338). This was also the year recording a trading profit of 20

per cent. The Court of Directors was obviously aware of the high opportunity cost of holding this amount of cash as reserves and during the next four years decided to reduce the size of the bond debt: a high liquidity to liability ratio was an essential part of its economic thinking.[96] Perhaps the East India Company's policy on this matter affords one of the few concrete indications of the problem touched upon by Adam Anderson, who stated in his *Origin of Commerce* that 'the proportion which the quantum of ready cash always necessary to be reserved in this [Bank of England] or any other public or private bank, for the circulation of all their cash notes and credit of accounts, bears or should bear to the total amount . . . may be properly termed the fair and reasonable mystery or secret of all banking'.[97]

The emergence of the East India Company as a semi-banking institution in the early years of the eighteenth century with its liabilities fully backed by the collateral of government securities reflected a general monetary development of the time. The most famous and notorious parallel examples were the 'system' of John Law in France and the South Sea Company in England, stigmatised by Sir Robert Walpole as the 'never-to-be-forgot or forgiven South-Sea Scheme'.[98] The foundation of the French Banque Royale in 1718 and that of the Compagnie des Indes a year later were part of Law's plans to reduce the French government's debts by exchanging them for shares in the new India Company. In a scene of mounting financial speculation in Paris, Law was reported to have boasted publicly that 'there was but one great kingdom in Europe and one great town; and that was France and Paris'.[99] The connection between the British National Debt and the shares of the South Sea Company in the disastrous year 1719-20 was equally close, and the initial success of Law's efforts in France aroused alarm in England, both in the official circle and among the East India Directorate. However, the Company remained relatively passive while the South Sea Bubble was reaching its climax and the Court merely instructed the Indian Councils to be on their guard against the powerful competition posed by the second French Compagnie des Indes. The English East India Company could not entirely escape from the financial crisis of 1720-1, but the strong position built up over the previous decade by careful management and a sound distribution of dividends helped to absorb the blow, and the Company's shareholders at least suffered no hardship.

Part of the reason for this success lay in the high profits earned during 1710-16. The history of the Company's financial results for the period from 1710-45 can be divided into four unequal parts. During the first seven years the net profits remained in double figures, the highest rate (22.3 per cent) being earned in 1713. The second phase begins in 1717 and ends in 1726. The average profits were low in these years with a

certain amount of wide fluctuations. In 1717 the rate was only 3.7 per cent and next year it turned into a loss of 2.6 per cent. The improvement of 1719-21 was followed by a net loss of 8.3 per cent in 1722. Large gains were made in the years from 1727 to 1732 and the average rate for these 6 years was 14.5 per cent. For the remaining 13 years high rates punctuated a low average of 4 per cent. There were only four examples of the rate exceeding 10 per cent, though in 1734 it amounted to 21.7 per cent. It should be borne in mind that the way in which the costs and receipts are defined in the tables make these calculations not historic rates of profits and loss but rates derived from current cash positions. It is evident that the total sums spent under the headings of goods and treasure, though they appear as costs, are also future investments expected to lead to a cash inflow. Whatever the real annual rates of profits, the total amount of resources available after deducting all outgoings determined the Committee of the Treasury's policy towards dividend payments and the reduction or an increase in the Company's capital liabilities. In the absence of the minutes of the subcommittees, we do not know what particular guidelines were followed in taking these decisions. A convention seems to have been established that the dividend rate was to be held constant at around 8 per cent. There was no attempt to go beyond this level on the part of either the management or the shareholders, even in years when the Company was obviously making money and accumulating cash in its reserves. On the other hand, a fall in the dividend rate below 8 per cent led to stormy scenes and strong resistance by the members of the General Court.

The origin of the 8 per cent dividend rate probably lay in some sort of contemporaneous expectation that it should be twice the rate of interest paid on the bond debt. The Company's loan operations and the successive conversions of the bonds to different interest rates attracted far greater interest and debates in the meetings of the Court of Directors in the eighteenth century than did the question of dividend payments. During the first decade of the century, under the stringency of war finance, the East India Company had paid a higher rate than it did in the late 1670s. But in March 1715 it was proposed in Court that the interest rate on the bond debt should be reduced from the current 6 per cent to 5 per cent.[100] A notice was to be inserted in the *Gazette* announcing the change and inviting the bondholders either to renew their papers at the new rate or to have these paid off. There were soon indications that the reduction of the interest came too soon, for six months later the members of the Treasury Committee recommended that the rate should stay at 6 per cent, because 'they were apprehensive from the present circumstances of affairs that the demand for paying off the bonds may be greater than was expected, and that, by reason of the ex-

pected ships not having arrived, the sum arising from the present sale will be much short of what was depended on'.[101] The Company's sales revenue indeed fell by £204490 in 1715-16 from the previous level of receipts, but the total cash reserves stood at £1536072 at the end of June 1715. With bond debts amounting to £2.7 million and an expenditure in excess of half a million planned for the coming shipping season, the cautious attitude of the Committee was well justified. It was not until the summer of 1716 that the interest rate was at last brought down to 5 per cent and by next year it was further cut by 1 per cent.[102] The East India Company's measure occurred at the same time as the government was putting forward its own proposal for the repayment or the conversion of the redeemable part of the National Debt to 5 per cent.[103] The general easing of the capital market in 1717 was welcomed by merchants. As the Amsterdam bankers and bullion dealers, Chitty & Son, remarked, 'If they should propose paying off such as are unwilling to continue their money on the new conditions that may be made, as several think they will, it will be an extraordinary expedient to preserve your credit in its flourishing condition both at home and amongst your neighbours, who have not hitherto on the like occasion found out so good a secret, or at least had not the power to practise it.'[104]

The interest taken by Chitty & Son, who supplied a large amount of silver to the East India Company in 1715-17, in British National Debt merely reflected the strong financial ties between London and Amsterdam. Dutch investment in the English Company in this period was not probably very significant in terms of total figures. But there was a steady turnover of the Company's shares in the Amsterdam bourse, and the Court of Directors attached considerable weight to the free saleability of stocks in the markets abroad. Great unease was caused in 1730 when Sir Justus Beck attempted to prevent the sale of certain shares belonging to the leading banking house of Amsterdam, Andrew Pels. Beck, who generally acted as an attorney for foreign stockholders, filed a suit asking for a stay of transfer, alleging that the shares sold by Pels were really held in trust. The Company immediately instructed its own counsels to represent to the Courts that the Transfer Book recorded the disputed stocks in Pels's own name and not in trust and also to point out 'the damage that may arise to the Discredit of the Company's stock if the proprietors should be hindered transferring the same . . . especially as to merchants abroad who lend money on the credit of it'.[105] Apart from the Dutch investors, there were other foreign shareholders in the Company. In May 1714, Anthony Dalies, 'Lord Baron of Caussade', living in Geneva empowered Anthony De la Roque of London to sell £500 of his stock and have the transfer inscribed in the stock book. In August, Jacomo de Prett, banker of Antwerp, executor of 'The Mortnary, House of late Mary Mechtildis Van Horenbeck', instructed Sir Joseph

Hodges to transfer £500 worth of stock. In September, Lewis La Conde, merchant of London, was similarly empowered to sell the shares of Francis Le Clere of Leipzig.[106] These transactions arose from the custom of buying and selling inscribed stock which required the name of the owner to be formally registered with the institution issuing them.[107]

The early decades of the eighteenth century brought great financial strength to the East India Company. The two visible symbols of this new development were the declining interest rate and the stable dividends. If there was anything resembling a crisis of confidence, it occurred only twice: first in 1720-1 from the pressure of external events and later in 1732-3 because of internal conflicts within the Company. The crisis of 1720 was more alarming, but on neither occasion were the economic effects really serious. The main pressure felt by the Company when the South Sea Bubble burst was from an extreme shortage of bullion. In July 1720 the exchange rates on Amsterdam fell sharply as foreign speculators sought to transfer money realised from the sale of stocks.[108] Rumours were circulating that the Swiss Cantons were about to liquidate their holdings of South Sea shares, and the London newspapers soon began to notice and comment on an outflow of bullion in the direction of Holland. In an effort to reduce the strain in the foreign exchanges the Bank of England agreed to intervene and drew bills on its debtors in Amsterdam. In the middle of September the directors of the Bank and the representatives of the East India Company, and the South Sea Company met together to discuss the flight of capital. By the end of the month an international crisis was developing with full force. The French government led the way by suspending the acceptance of notes issued by the Banque Royale, and in the Netherlands the fall in share prices drove many eminent merchants into bankruptcy. The description of the winter events written by the East India Company's Committee of Correspondence in February contains all the ingredients of a classic liquidity crisis.[109] The collapse of the share boom caused a run on the banks and creditors strove to call in their loans. The premium on ready cash rose so sharply that even bullion merchants began to hoard their stocks, and as each European financial centre attempted to stem the slide in the foreign exchange rates, the depressive effects were simply transmitted from one capital to another. The East India Directorate authorised the Correspondence Committee to draw up contingency plans 'during the present difficultyes for the lading home of the now outward-bound shipping by taking up money in India at interest, by bills of exchange, respondentia or otherwise'.[110] When the Commissioners of Customs pressed the Company for money due to them, the Directors firmly replied that the Customs Department could not be unaware that the Exchequer owed the Company much greater sums in interest payments. If the Commissioners would be so kind as to remind

the Lords of the Treasury about these debts, there would be no difficulty on their part in paying the customs even in the present circumstances of affairs.[111]

As far as the East India Company was concerned, the financial crisis of 1721 passed as quickly as it had come. It is true that the record loss of 8 per cent in 1721-2 led to a decline in the cash reserve for two years running. But it was not until 1723 that the dividend rate was lowered from 10 to 9 per cent, the higher rate having been paid since 1716. The small reduction was in step with the falling interest rates. For the Company had paid 5 per cent on its bonds from 1719 to 1724, when it was reduced to 4 per cent.[112] Although in managing their bond debt, the Court of Directors had to be careful in following the yield on government securities, there was no significant change in its total size which remained constant at £3.4 million between 1723 and 1729. The Company agreed in 1730 to accept 4 per cent on its government loans and paid £200000 to the Crown for the renewal of its charter to 1769.[113] By this time certain internal tensions were building up within the Court of Directors which broke surface two years later. The exact reason for the dramatic conflicts of 1732 is still obscure. The crisis began in February when the majority of the Directorate, after years of exasperating inaction, decided to dismiss the entire Calcutta Council for corruption and disobedience.[114] It was public knowledge that the Company's sales in London had suffered severely from a deterioration in the quality of goods. In June Robert Adams, who himself had been suspended earlier from his post as the Chief of the Tellicherry Factory, informed his friend Stephen Law, the future governor of Bombay, that the existing Directors of the Company may have to face a parliamentary inquiry. Many prominent citizens of London, according to him, had refused to be nominated for election to the Court of Directors. The servants returning from service in India were not being encouraged to stand, and the Company was forced to take in Spanish and Lisbon merchants. With an obvious and sarcastic reference to Sir Matthew Decker, the Chairman of the Company and a leading member of the wealthy Dutch colony in England, Adams concluded that 'in all probability Dutch Interest and maxims may prevail in Leadenhall Street as well as in Holland'.[115]

The meeting of the general shareholders was held on 9 August and it confirmed the shrewd and cunning prognosis of the ex-Chief of Tellicherry. Decker who had been re-elected to the Chair announced in a long opening speech that the Company in spite of its best efforts to continue paying dividends at 8 per cent and reduce the bond debt was no longer in a position to do so. The frauds committed by the servants in India and the increasing competition from the new companies set up on the Continent for trade to the Indies had eroded the financial margin

of the Company, which made it necessary to reduce the dividend to 6 per cent. His suggestion was greeted with a storm of protests. One of the shareholders, Da Costa, pointed out that the East India Company consisted of two sorts of proprietors, the stock proprietors and the bondholders. He saw no reason why the burden should all fall on the stock owners. Did the Company not accumulate a large cash balance over the past years ? The Directors surely need not draw on the current trading surplus alone for the extra £30000. Another member observed that the Company's stock had risen on the news of the arrival of ships from India and the result of the coming sales was not yet known. Besides, parliament might do something to ease the financial crisis for the Company. He was against any immediate reduction of the dividend. The Directors could reduce, if they wanted to, the interest rate on bonds by 1 per cent. In reply to the debate, Decker whose temper had risen visibly warned the Generality, 'Gentlemen, I have heard what hath been dropt in these discourses, about the opinion of your Directors, concerning the lowering of the Dividend, and also concerning the reducing of the interest on the Bonds. We have had both these under our examination. People may jest on such things, if they please. But I shall give you our Reasons, why we think it proper to reduce the Dividend. Gentlemen, we who have the honour to sit as Directors have taken our oaths to be faithful to you; but this doth not bind us to run the hazard of ruining ourselves. No. Remember what was done in the year 1720, and even lately in a neighbouring Company. They divided when they should not have divided; and two years ago, we made an Agreement with the Government... As to your Bonds, we have considered them likewise, and declare that there is not one gentleman but what wishes they may be reduced to 3 per cent. But then we think that it is not prudent to do it hastily . . . If you think proper not to agree to this proposal of the diminution of the Dividend, it is equal to me; and if you will try and make an experiment at your cost I am pleased.[5116] When the management's motion was put to the vote, it was carried and the dividend was reduced to 6.5 per cent.

From Table A.26 it can be seen that what had alarmed the Court were two successive years of low surpluses after the payment of the dividend (col. 2). In 1731-2 the Company had borrowed £220000 from the Bank of England, though the bond debt had been reduced by £378915 since 1730. But at the same time it is hard to escape the conclusion that the small financial down-turn was being used by a dominant faction in the Company to purge troublesome servants and their supporters in England. Decker had been a leading figure in the Directorate since 1719 and his dominating ways were not popular. However, at the end of his term of office in 1732-3, he chose to retire from the affairs of the East India Company altogether and apparently lost all interest in it.[117] In 1743 a pamphlet that he had written even made a biting attack on the

privileged position of the Company in national finance.[118] Decker was succeeded in 1733 by the energetic and reforming Chairman, Sir Josias Wordsworth, who had one of the longest records of high office in the Company. However, Decker's valedictory achievement was a successful conversion of the 4 per cent bonds to 3.5 and 3 per cent. In September 1732 he reported to the Court of Directors that the members of the Committee of the Treasury had met the directors of the Bank of England to discuss the possibility of a loan but the Bank had refused to lend under 4 per cent. A proposal was made by several proprietors to advance money to the Company on bonds at only 3 per cent interest. There were twenty subscribers offering £240000, which was increased by another £185000 from other financiers a week later.[119] Armed by this advantageous proposition, the Court requested a general mandate from the shareholders to pay off the 4 per cent bonds or reduce the interest in the best possible way.[120] By December the conversion of the existing bond debt was largely carried out. Five years later the interest was further reduced from 3.5 per cent to 3, and the Company paid off £2 642 646 worth of the old bonds in exchange for new ones totalling £2985720.

The internal crisis of 1732 did not involve the relationship between the East India Company and the government, which continued to be friendly until Henry Pelham's reconstruction of the National Debt in 1749. The Company increased its £3.2 million government loan by another £1 million at 3 per cent in 1744 as its contribution to the war finance. The charter of the Company was extended from 1769 to 1780, though the Court of Directors was unsuccessful in its demand that the government should prevent the losses arising to the Company from the smuggling of tea by lowering the duty.[121] The extra £1 million Exchequer loan authorised the Company to increase its own bond debt by a similar amount, and in 1746 the Court raised the interest rate to 4 per cent. At the end of the War of the Austrian Succession complicated financial steps were taken both by the government and the Company to reduce the interest. With the help of Samson Gideon, who was to come to the rescue of Pelham's Ministry also, the Court of Directors devised a plan in November 1749 to convert the bond debt to 3 per cent.[122] However, when a similar proposal was laid before the General Court from the government, approved by the Directorate, for the reduction of the rate paid on the Exchequer loan the shareholders rejected it. In January 1750 the Bank of England followed suit, and it looked as though Pelham's financial plans were about to collapse into disaster. The dramatic rescue operation launched by the government relied on the services of two men, Samson Gideon, the influential and wealthy Jewish stockbroker, and Sir John Barnard, the old enemy of Decker and the East India Company. By February Gideon had persuaded the Bank of

England to change its mind, and a bill was drafted in parliament which proposed to pay off the loan of £4.2 million from the East India Company unless it agreed to accept a lowering of interest to 3.5 per cent. There was a terrible threat implicit in the proposed legislation. If the Company's Exchequer loan was paid off, it would no longer have the corresponding right to issue fixed-interest bonds. The trade would have to be financed entirely by new share capital, and the arrangement of nearly half a century would disappear at one stroke. It is not surprising that at the shareholders' meeting on 25 April 1750, in spite of strong sentiments expressed, the General Court gave way and agreed to accept 3.5 per cent on its 4 per cent £3.2 million loan.[123] After 1755 the interest was to be reduced to 3 per cent. How successful was the Company commercially in the last decade of our period which witnessed the loss of Calcutta and the subsequent Revolution of Plassey? Some idea can be gathered from the following figures of dividend payments between 1751-62.[124]

Year	Dividend	Rate	Share capital
1751	£213526	6.7	£3196300
1752	£276026	8.6	£3196300
1753	£248526	7.8	£3196300
1754	£248526	7.8	£3196300
1755	£248526	7.8	£3196300
1756	£185704	5-8	£3196300
1757	£185704	5-8	£3196300
1758	£185704	5.8	£3196300
1759-60	£185704	5-8	£3196300

These were modest returns, though the declining trend in dividends probably reflected the downward movement in bond rates. But these years of wars and revolution in India were by no means easy for the Company's finances at home, and the Court of Directors experienced considerable difficulties in meeting their obligations to the shareholders. One of the main causes of the dislocation in the home finances was the enormous amount of bills of exchange, which the officials in Calcutta and Bombay drew on the Court of Directors in London. The size of these sums naturally led the Company to suspect that these were the proceeds of illegal transactions.[125] The anger of the Court was expressed most forcefully in a letter to Bombay, 'We are now to animadvert upon your most extraordinary conduct in granting Bills of Exchange upon us for such considerable sums, it has astonished us beyond measure . . . for you mention that our servants at Bengal had refused those Bills and why? Because they had already accepted of immense sums paid into our Treasury there, was not this sufficient to deter any

reasonable men, who had their employers' interest at heart, to give an absolute refusal? We had sent abroad 20 ships' cargo, were drawn upon for near £500,000, without the aid of a single shilling from the Returns of this year's ships.'[126] The control of the public revenues of Bengal was beginning to create a scramble for the spoils and a marked deterioration in the standards of strict and orthodox financial management followed by the Company for more than half a century.

19
CONCLUSION

Adam Smith lifted contemporaneous economic thinking from the minutia into which it had fallen and he was able to re-state the function and role of commerce in a nation's economic life in the context of broader issues. His seventeenth-century predecessors had been concerned with questions that had a vital bearing on domestic and international prosperity. However, as the cycles of misery wrought by wars, pestilence, and economic depressions gradually receded in the face of the stabler conditions of the eighteenth century, the writers of pamphlets and tracts settled down to the discussion of largely recondite matters. This intellectual heritage pursued even Adam Smith and his most-quoted and fundamental statement on trade followed on from a discourse on the monetary practices of the Cossacks, Merovingian kings and Saxon princes. According to Smith two distinct benefits were associated with trade. 'It carries out that surplus part of the produce of their land and labour for which there is no demand among them, and brings back in return for it something else for which there is a demand. It gives a value to their superfluities, by exchanging them for something else, which may satisfy a part of their wants, and increase their enjoyments. By means of it, the narrowness of the home market does not hinder the division of labour in any particular branch of art or manufacture from being carried to the highest perfection. By opening a more extensive market for whatever part of the produce of their labour may exceed the home consumption, it encourages them to improve their productive powers and to augment its annual produce to the utmost.'[1] This passage occurs in a chapter of *The Wealth of Nations* dealing with the role of precious metals in human society. The impact of American treasure on the European economy and its re-exportation to the East Indies were questions that naturally could not be excluded from the discussion. The subject provided Adam Smith with an opportunity for stressing the neutral function of money and dissociating it from the forces of real economic growth. 'It is not by the importation of gold and silver, that the discovery of America has enriched Europe', Smith claimed. Its benefits lay elsewhere: 'By opening a new and inexhaustible market to all the commodities of Europe, it gave occasion to new divisions of labour and improvements of art, which, in the narrow circle of the ancient

commerce, could never have taken place for want of a market to take off the greater part of their produce.[52] The discovery of the passage to the East Indies round the Cape of Good Hope provided similar opportunities; by exchanging American treasure for the commodities of Asia, European nations gained in real terms. This gain would have been even greater, Adam Smith believed, if the East India trade had not been confined by the exclusive privileges of the chartered companies.

If Adam Smith was unaware of the theoretical flaws in his arguments, he was undoubtedly right to draw attention to the complementarity of Europe's trade with the New World and the East Indies. The discovery of the sea-routes, new markets, and sources of supplies in Asia, America, and Africa was part of a great migratory movement whose early epicentre lay in the Iberian peninsula. The transition from an Hispano-American type of overseas expansion to the commercial imperialism of Anglo-Dutch trading companies held profound historical forebodings for the nations of Asia which even Adam Smith was able to fathom. The political overtones of the East India trade were indeed the strongest weapon in the armoury of those who argued for the continuation and strengthening of the commercial monopoly. There were many different twists in the controversy. The long-held anti-Islamic sentiment in law and diplomacy pointed to the need for presenting a strong and united enterprise to the land-based Asian powers. But the main danger to a private and individual form of trading in the East Indies came not from the policy of local rulers but from the internecine struggles among the Europeans themselves. There was no doubt in the minds of the early English merchants who formed the East India Company that the naval threat from the heavily armed Portuguese squadrons patrolling the eastern waters could be countered only by the newcomers' manning similar fleets.[3] In the second half of the seventeenth century, when Sir Josia Child decided to launch a naval war against the Mughal Empire on behalf of the Company, he was acutely aware of the relative English weakness in the field of imperial policy as compared with the Dutch. The most forceful statement of this belief was expressed in a letter addressed to the Madras Council in 1686: 'You see what a mighty charge we are at to advance the English Interest and make this Company a formidable Martial government in India which formerly the Dutch despised as a parcel of mere trading merchants or Pedlars as they used to miscall us . . .' and Child went on to emphasise that without revenue 'it is impossible to make the English nation's station sure and firm in India upon a sound Political Basis and without which, we shall always continue in the state of meer merchants subject to be turned out at the pleasure of the Dutch and abused at the discretion of the Natives.[54] Neither Adam Smith nor the many critics of the East India Company who challenged its right to the exclusive trade examined in detail the

totality of the historical situation. No one asked in the seventeenth century why the government and the trading companies of various European nations found a common bond of interest which expressed itself in the formation of the monopoly. Had they done so, a simple answer would have emerged. The organisation and the conduct of the East India trade could not be strictly separated from the conduct of national foreign policy, and reasons of state dictated that the merchants should look to the government for a large measure of political support. The endowment of the V.O.C. and the English East India Company with delegated political powers in Asia and with protected national markets at home was the Dutch and English response to the historic claims of monopoly made by the Crown of Portugal.

The history of both the Companies during the century from 1660 to 1760 demonstrates not only that they shared a common institutional structure but also that they were part of a much larger economic system. The main function of the two organisations was to act as a central distribution agency in marketing the commodities of Asia throughout the world. The centralised function represented an innovation to the commercial practices of the time, as production for wider markets was still organised on the basis of peasant households or artisans contributing individual labour and skills. But the distribution of the goods was already highly capitalistic in character. The financing of the new imports presented little practical difficulty, as the American silver and its continued mining in Mexico and Peru provided a natural monetary mechanism which was self-adjusting. The rise of European trade with Asia, especially during its great period of expansion in the seventeenth century, can certainly be linked theoretically with the rising level of monetary liquidity in southern and western Europe stemming from the distribution of Spanish-American treasure. The purchasing-power of European nations, and therefore the import demand of their people, increased as a result of the expansion in money supply. If this much is evident from the overall pattern of trade between Europe and the Indies, it is also apparent that by the end of the seventeenth century the monetary arrangements of the old inter-European trade were no longer working satisfactorily. The period from 1680 to 1720 was one of great silver and monetary crisis.

The exact nature of the crisis, and indeed the whole mechanism through which the money supply adjusted itself from the government mints to the merchants and ultimately into the hands of the public, are still obscure, though we are able to isolate the main causal forces from the records of the English and the Dutch East India Companies. Since the lifting of the restrictions on the exportation of precious metals in the middle of the seventeenth century by the Dutch government, Amsterdam became the capital of the west European bullion trade, next only

to Cadiz and Seville in importance. The English East India Company no less than the V.O.C. depended on the Amsterdam banking houses to provide them with the necessary amount of precious metals for the annual shipment to the Indies. These exports became so substantial during the period under review that the demand of the trading companies often succeeded in divorcing the market price of bullion from the price fixed by the government for coinage at the mints. This phenomenon arising from the action of the Companies was apt to be seasonal. But from 1690 to end of the War of the Spanish Succession the normal supplies of silver from Spanish America were disrupted to the extent that it became universal and the price of silver remained consistently above the English mint price. The economic effect of the rise in the silver price was predictably enough a devaluation of the national currency and a worsening of the terms of trade, as the East India Company repeatedly pointed out. One of the side-effects of the early eighteenth century monetary crisis was the rapid development in England of alternative credit instruments and token currency. There is little evidence to suggest that after the Peace of Utrecht, in spite of chronic complaints of monetary disorders, merchants and traders suffered from a shortage of capital.

It is probable that a large proportion of the new silver mined in the New World annually found its way to Asia in our period. There were three principal routes which continued to be active. The Mediterranean trade of the Middle East was an important supplier of silver to South Asia. The total amounts involved were extremely large, although no exact estimates can be made. The exports of the trading companies via the Cape route were the second most important channel. Finally, there was the galleon trade between Acapulco and Manila which brought silver both to China and India. Contemporary observers as well as latter-day historians have tended to attribute this massive outflow of precious metals to the Indies to non-economic factors. But it is clear that Asia's absorption of silver, and to a lesser extent gold for a limited period in the seventeenth century, was primarily the result of a relative difference in international production costs and prices. It was not until the large-scale application of machinery in the nineteenth century radically altered the structure of production costs that Europe was able to bridge the effect of the price differentials. The basic mechanism determining the structure of trade between Europe and Asia was simple. The European traders in India, the Indonesian archipelago or China were not able to market Western products at prices that would generate a large demand for them and thus provide the necessary revenue for the purchase of the import goods. The trade balance was settled through the internationally accepted medium of exchange, precious metals.

The financial arrangements for the provision of silver and the day-

to-day events that affected them were no doubt two of the most important elements in the successful conduct of the East India trade. This was an area where the economic environment of the trading companies intruded upon their internal affairs most conspicuously, but there were other, no less urgent problems that needed effective resolution. The most difficult task for the East India Company's managers was the creation of an economic decision-making process that would establish an equilibrium between the supply and consuming markets. They approached the problem in two logical steps. The Company first of all created a regular machinery for the physical operations of trade. Secondly, decision-rules were formulated that set the parameters of the working variables. The average duration of the East India voyage was eight months, and the round trip involved a communication lag of eighteen months. The facility for sending letters through the overland mail cut this interval by a considerable margin, but the actual supply of goods could not overcome the constraint of the basic time-period. The East India Company's answer to the distant nature of its trade was to create the factory system, the permanent trading establishments with a bureaucratic staff who were given definite instructions on procedures. The Company's factories stretched from the Red Sea, the Persian Gulf, South Asia, across the Indonesian archipelago, to the China seas. This extended trading network was divided into several homogeneous regions and the factories in each area were placed under the authority of a 'President' and his council. Each presidency was autonomous, but there were close trading links between them, and the logistics of the shipping demanded careful co-ordination of time-schedules between different head settlements. This particular type of commercial organisation was able to handle admirably the discontinuities imposed by the seasonal arrival and departure of the ships from Europe. The best time for the purchase of the agricultural commodities or the textile goods differed from one area to another. In most cases the quantities demanded by the V.O.C. or the English Company were so large as to make it impossible to procure them in a hurry when the departure time for the homeward-bound ships drew to a close. The need for standardising the quality of the goods made it imperative also to place contracts in advance. The procurement of the return cargo clearly required action continuing through the whole year. But there was an important exception to this general pattern. In China the imperial authorities refused to allow the Europeans to settle permanently. They were not permitted to deal with the merchants in the interior production areas, as in India or the Middle East. The purchase of tea, silks, and other Chinese products was organised on the basis of the supercargo system, with travelling merchants trading aboard the ships.

The operational sequences were strictly controlled and regulated by

the Court of Directors, which acted as the central decision-making body for the Company. The Court divided itself into six or seven smaller sub-committees whose function was to monitor the performance of the Asian settlements and to determine the volume of trade each year. The wide separation of the markets meant that the Company had to set up an efficient communication system and procedures for ordering and holding stocks. The presence of several large monopolistic companies selling East India goods in Europe created an oligopoly for each one of them. In this context it was vital that the market share of an individual company was not suddenly eroded by large price differences or a physical shortage of goods. The method adopted by the East India Company for dealing with this fundamental problem was the establishment of the quarterly auction sales in London. The bidding process and the final prices at which the imports were sold provided the Committee of Correspondence with highly sensitive indicators on the level of demand and the profitability of each line of goods. The Company could influence prices by varying the amounts of goods put up for sale at the auctions. It could calculate the margin of profits by deducting from the total revenue the prime cost, customs duty, freight payments, insurance and interest charges. The results of applying the formula provided the Committee with information for subsequent orders from the Indies. The whole process was standardised quite early on in the history of the Company and followed without any substantial change. The decision-making process sought to minimise the distortions in the communication system and the level of performance; but it could not guarantee complete stability.

An analysis of the actual time-series on the Company's trading variables reveals the presence of great fluctuations. Some of these were caused by random events, wars, droughts and economic depressions outside the control of the Company. Others were cyclical. The imbalance between supply and demand working through a time-lag of eighteen months created the necessary condition for a regular oscillation. But all through the period there was a strong undercurrent of upward trend in the Company's total imports and exports. The quantitative techniques measuring the strength of relationship between these two variables and others such as an aggregate index of cost prices, volume of imports, orders, the rates of profit, and sales revenue, show significant results; they also demonstrate that the data cannot always be successfully explained by methods involving the use of continuous functions. For example, the hypothesis that the total volume of imports demanded by the Company and supplied by the Asian settlements was dependent on the cost prices and the amount of purchasing funds available works quite well when the data are fitted to an appropriate equation, but the annual variance left unexplained is still about a third. Was

this because of random factors or an inadequate formulation of the economic decisions ? The question can be resolved by looking at the procedures and considerations that determined the total volume of return cargo from Asia. The Company's officials at the head settlements were annually provided with a list of orders required for the next shipping season, and they placed the necessary contracts in advance with the suppliers. When the ships actually arrived there was often a considerable discrepancy between the goods delivered by the merchants at specified prices, the tonnage capacity of the ships, and the quantities ordered by the Company. The Asian councils had to find an optimum solution to four interrelated problems: the marginal cost of borrowing if the funds available were not enough, the cost of detaining the ships (in terms of freight and demurrage payments) if the cargo was not ready, the cost of sending them home half or partially laden, and the cost of oversupplying the goods. The presence of these complicated factors could easily have produced the kind of results given by our model.

The commercial success of the East India Company and its long record of survival owed a great deal to the creation of an impersonal bureaucratic structure. Procedures and rules were formalised, commercial targets and the methods of economic evaluation were strictly laid down, and the management could take action at an impersonal level. By conducting business through committees at home and councils in the Indies, the Company diffused the concentration of power and authority without weakening the contribution of individuals. The corporate policy naturally reflected the vigour and determination of the chief executives. An energetic Secretary or Governor was able to reinvigorate the system when a certain lethargy had set in. The history of the Company under the direction of Sir Josia Child or Josias Wordsworth illustrates the point. When Child came to power the Company was facing increasing competition at home from interlopers and great danger from the Dutch in the East Indies. His vision of a national role for the East India Company, though lacking diplomatic finesse or elegance of language and mind, enabled the organisation to survive both threats. Wordsworth took over from Sir Matthew Decker at a time when the Company's officials in India displayed every sign of defying the home authorities and making a bid for establishing an independent position for themselves. The inaction of President Frankland and Deane in Bengal and the political ambitions of Sir Robert Cowan and Henry Lowther in Surat moved the Company's affairs in India in a direction contrary to the views of the Court of Directors. Matthew Decker ended his long career with the Company in an atmosphere of financial scandals and dissatisfaction from shareholders. The new Chairman and the inner members of the Directorate were able to restore the authority of the Company to a large degree. The dismissal of many senior servants from

service in the 1730s was the most tangible display of corporate strength in our period of study.

After the union of the two rival companies in 1709, the United East India Company thoroughly reformed its business practices. The rapid increase in the financial and political strength of the Company during the second and the third decades of the eighteenth century partially reflected this new approach and the great strides taken by national economic institutions. The financial history of the Company was turbulent in the seventeenth century. The most rapid expansion in the volume and value of trade occurred in the 1670s and 1680s. But the growth took place against a background of chaotic financial management. It is difficult to reconstruct the historic rates of profits made by the Company in the second half of the seventeenth century. The dividend payments between 1660 and 1685 average out at 17 per cent a year, while the yield on East India stocks was in the region of 7-8 per cent. In the last decade of the century the dividend payments ceased and at times the Company had difficulty in raising sufficient working capital. These difficulties reflected the earlier policy of distributing large sums of money to the shareholders without a proper accounting basis. In the period before 1709 the management kept no record of annual revenue, operating costs and net profits. The only formal financial statements prepared by the Court of Committees were the seven-year valuations of the Company's assets and liabilities. All this changed under pressure from parliament and the public. The financial books of the United Company were exemplary records of corporate viability. Between 1710 and 1740 the dividend rates were stabilised at around 8 per cent, but there were considerable variations in the profitability of trade. The highest rate was earned in 1713 when it was 22 per cent, while in 1722 there was a record loss of 8 per cent. In general the net profits were comfortably in excess of the dividend rates and enabled the management to accumulate capital. The surplus fund supported the Company's important and leading banking role in the City. The principle of permanent joint-stock capital which had become firmly established with the General Stock of 1659 provided a potential investor in the Company with two different types of outlets. He could invest in the Company's ordinary stocks at the going prices and share in the normal risks of trade. He could also subscribe to its short-term bonds issued at fixed rates of interest. After 1709 the East India Company's capital arrangements followed a tripartite plan. Its entire share capital of £3.2 million was raised from the investing public in the City, but the whole amount was lent to the government at specified interest rates. The Company in return was given the right to issue short-dated bonds to an amount equal to its share capital. Although the Exchequer loan effectively provided a collateral security to the bondholders, the Company's ability to raise short-term capital

naturally depended on its capacity to meet any sudden demand for redemption. The banking function of the East India Company called for a sound management of the reserves, and the Court of Directors often held cash exceeding £i million.

The political support which the Company received from English Crown was the result of a subtle and not-so-subtle division of financial gain. During the period of competition with the interlopers in the 1680s and even earlier, the Company had openly given large presents to the king. In the eighteenth century the contribution of the large Exchequer loan was the price which the government extracted from the Company for its exclusive rights. The practice was entirely in line with the redistributive structure of trade characteristic of the time. The merchants had to pay protection money to those who were in a position to do violence to them. The profits of trade were shared between direct participants and the holders of political power. In Europe the division of interest was gradually institutionalised, and the East India Company at least paid its share willingly. But in Asia, in its major trading areas, the lines were always indistinct. A trading organisation that voluntarily offered £10000 to its sovereign equated a payment of £500 to an Asian prince with political extortion. The attitude of mind that habitually regarded Asian political order as despotic without laws or individual rights would appear incomprehensible unless the political aims of the trading companies are kept in view. The Europeans in Asia in this period were no ordinary traders. They were fully armed and determined to trade with sword in hand, as one servant of the English Company defiantly claimed. The distrust of Asian, particularly Islamic rulers, which made the Europeans appear rightless in India was the inverted situation which denied rights of property or personal safety to non-Christians in Europe.[5] Furthermore, the Dutch and English trading companies were fully aware of the higher profits which armed trading offered to them as opposed to peaceful. If they resisted paying redistributive charges to Asian political authorities, they were just as anxious to become redistributive enterprises themselves.

The political ideology of the English East India Company found expression in two complementary directions. In the Mughal Empire the Company sought to establish a series of fortified and semi-sovereign enclaves, supported by a powerful naval fleet. This provided the main instrument of extracting redistributive payments from Asian merchants. Indigenous ships sailing from Surat or Hugli bought safe-conduct passes from both the Dutch and the English, as indeed they had done previously from the Portuguese. The revenue from the sale of the passes could not have been large, but the system was designed to serve as a perpetual reminder to the Mughal ruling authorities of the menace of European presence around the coasts of India. The command of the

seas possessed by the trading companies set the pattern of their political activities in Asia. The vulnerability of the East India Company's factories and settlements from the land forces of the local rulers was counter-balanced to a great extent by its capacity to blockade important trading ports and interrupt the seaborne trade of the merchants. There were many conflicts between the Company and the Mughal officers, both in the seventeenth and in the eighteenth century, in which two basic moves were played out carefully. A dispute threatening to get out of hand would cause the imperial officers to call out the troops and put the European factory houses in a state of siege. The companies responded by moving up their naval fleets from the head settlements and blockading the port. When the leading Indian merchants found that they were likely to lose the season's voyages, they undertook to act as intermediaries in settling the dispute. Neither the Mughal *umara* nor the trading companies were anxious to resort to actual force of arms, and in most cases agreement was reached without bloodshed. The expensive failure of Sir Josia Child's war policy in 1688-9 taught the Company that the use of sea-power was better as a strategic deterrent than as a tactical weapon. The lesson was not forgotten easily.

The European East India Companies were the symbols and manifestation of the new developments that were taking place in the history of Western nations from the beginning of the seventeenth century. These were expressed in the art of shipbuilding and navigation, in settlement of colonies in the New World, the ability to organise and manage distant commercial ventures, and in new forms of financial institutions. The trading companies contributed to all these activities. In Asia the impact was no less significant. In areas such as the Indonesian archipelago both the Dutch and the English followed a mixture of commercial and coercive methods to procure their return cargo of pepper and spices. But in India and China normal market transactions were the main form of trade. The economies of the two great empires of Asia benefited from the expansion of economic relations with the West. The huge influx of bullion which resulted from the new demand was only one indication of the growth in income and employment. The export of textiles turned the coastal provinces of India into major industrial regions, and the bullion imported by the Companies passed directly into circulation as payments for the export goods. The contribution made by the merchants and the producers to government revenue and taxation was the main reason, as the Court of Directors and the Mughal historian Khafi Khan agreed alike, why the ruling powers in India encouraged European trade.

Appendix i

NOTES ON THE STATISTICAL TABLES OF THE EAST INDIA COMPANY'S TRADE

Sources of statistics

The main sources of quantitative information on the English East India Company's official trade are the account books. These fall into two broad generic groups based on the geographical origin of the records: *(a)* the books kept by the Company's Accountant General's Department in London, and *(b)* the books originally compiled by the trading establishments in various parts of the Indies and sent over to London periodically. The first group can be divided further into three different types of account books: (i) the Commerce Journals, (2) General Ledger Books, and (3) the Cash Books. Group *(b)* comprises only (i) Commerce Journals and (ii) Ledger Books. Miscellaneous information is also available in the Company's outward letters preserved in the Despatch Books, Home Miscellaneous Series, and the Memoranda of the Committee of Correspondence, but the statistics contained in these records are not systematic nor are they of a long-run nature. The early Despatch Books give the names of the ships sailing for the Indies together with a summary of their cargo and its total value. However, the practice was discontinued from the 1680s. The Home Miscellaneous Series contains statistics covering four different areas of the Company's trade: exports to Asia, sales of import commodities, finance including its balance-sheets, list of shareholders, and capital stock, and finally the foreign exchange and bullion business of the Company. The papers in the Memoranda of the Committee of Correspondence relate to the rough notes made by the Accountants on the sales in London, the comparison of cost prices of the imports for different years, the sales prices of tea, and tables showing the assay results of foreign silver coins. The information dates from the early years of the eighteenth century. The Company's Court Minutes, known as the Court Books, include very full data on the London auction sales up to 1705, giving the quantities of individual lots of goods put up for sale together with prices realised. Systematic information on the Company's shareholders and the sale of stock is to be found in the Stock Ledgers Transfer Books. The daily or weekly quotations of share prices from 1732 to 1769 are given in a separate volume in the Accountant General's Department (call mark L/AG/14/7/1). All these records are preserved in the Company's archives in the India Office Records. The most important source of statistics outside the latter on the Company's imports is in the Public Records Office, in the series known as the Ledgers of Imports and Exports, Inspector General's Accounts, which cover the period from 1697 to I7^o. The data are reasonably disaggregated, but

not to the extent of the Company's own account books. In the British Museum there is a volume, originally belonging to the Company's Committee of Shipping, which lists all outward shipping with the total value of cargo, tonnage, the names of captains, the destinations, and the dates of return. The sailings given are from 1673 to 1790. All ships lost at sea are recorded. Finally, the Ledgers of Edward Backwell preserved in the archives of Glyn, Mills & Co provide very detailed corroboration of the entries relating to the Company's silver business recorded in its own accounts.

The account books and the system of book-keeping

The system followed by the East India Company in its book-keeping was essentially that of double-entry. The items under debits and credits appeared twice in the books and each run of entries ended with a subtotal or balance which was equalised with the corresponding balance on the debit or credit side by a profit and loss account. But the method of account-keeping within each different category of book varied. The main purpose of the existing records in the Accountant General's Department was naturally to provide the basis for multiple forms of financial control by the Company's decision-makers. The most disaggregated series were the Cash Books, which recorded every cash payment and receipt taking place in England on behalf of the Company. The sequence of entries was a strictly chronological one, and after 1709 the books give a monthly balance of debits and credits showing the cash position. The second series, the Commerce Journals, also follow calendar entries, but they are now grouped into various types of operations and copied under specific headings with subtotals clearly displayed. An example would perhaps illustrate the system clearly. The invoice of ships going out to and returning from the Indies is always entered in full in the Commerce Journals under the heading of 'Voyages to Bombay' etc. The quantity of each commodity shipped on board is given separately, together with the value in the local Asian currency and its equivalent in sterling at specified exchange rate. There is a total figure of value for each ship's total cargo. Similarly, the freight and demurrage payments are listed under the name of the ship with a total and subtotals for each commodity. The details of the Company's silver imports from the Continent and the payments for the bills of exchange are equally full, listing the names of the suppliers, the quantities, the cost of transport, cost of package, brokerage, the rates of exchange, and the name of the vessel in which the silver was shipped. The Ledger Books represent the final position in the Company's overall accounts, and all entries in these books are in the order of alphabetical headings, displaying the final balance for each set of books.

Changes in the methods of book-keeping

Although the basic system of account-keeping adopted by the Company during the period from 1664 to 1760 did not change fundamentally, there were many alterations on points of details, particularly on the type of information which was to be included in the Commerce Journals and the Ledger

Books. The starting year for the East India House account books, i.e. the group *(a)* books, is 1664 and all three series continue until the end of the Company's commercial activities in 1833. There are no surviving account books earlier than 1664, and it seems that the reason for this is to be found in the establishment of the Company's permanent capital from that year. The books previously kept obviously lost their practical relevance and became part of the historical records. Their subsequent disappearance or deliberate destruction was no doubt the result of a thinning-out process in the records department. From 1664 to 1690 the coverage of information in the East India House books is fairly consistent and comprehensive. But from 1690 to 1709, the period during which the Company faced many political and financial difficulties, the account books become very disorganised. Many detailed breakdowns of entries previously given disappear altogether, while others are copied in different pages of the books in unconsolidated form. The existence of separate accounts for the two rival companies, even after the merger of 1702, further complicates the position, and the reconstruction of the East India Company's commercial statistics during these years calls for considerable powers of interpretation and patient research. The main casualty in the Commerce Journals is the ships' invoices; these are generally given but not in as great details as before. The Indian cotton piece goods, for example, are enumerated by each subtype before 1682, whereas after this year they are all grouped together. In 1709 the Accounts Department was completely reformed and the books dating from the time of the union of the two Companies are completely standardised, returning to the old method of including comprehensive entries. But there was a major exception. All records of the Company's sales in London, of the commodities auctioned in the quarterly sales, were separated from the Commerce Journals and entered into three sets of new account books. These were known as the Calico and Silk Ledger, the Pepper and Drugs Ledger, and the Tea and Chinaware Ledger. Unfortunately these have all been destroyed, and it is no longer possible to see the degree of profitability of each individual commodity nor study the behaviour of the auction prices in detail. In the Commerce Journals the only information available on the Company's sales is on the total revenue realised under the three above headings. It is possible to see what the total sales revenue was for the accounting year from these figures. But as no quantity is given, we do not know how much of each commodity was offered for sale nor the level of stocks in the warehouses. However, in compensation for this serious loss the Ledger Books after 1709 contain some new types of information. Financial transactions such as the dividend payments, the contraction of bond debts, their repayments, short-term borrowings from the Bank of England, and interest charges are properly recorded under separate headings. All these transactions involving the members of the public and the City institutions had their own Ledgers, which have now disappeared.

APPENDIX i: NOTE ON STATISTICAL TABLES

The account books kept in the Indies

The surviving books start from the year 1702-3 and generally follow the same method as the East India House books in London. The main difference between the two generic groups is the absence of the Gash Books. It is clear from the recorded inventories of the Company's factories that the Gash Book was an integral part of the accounting system, even in the Indies. For some reason, however, the series was not sent back home. The Company's auditors in London naturally checked the accuracy of the Asian books and entries relevant to their own work, and some of these were of course copied into the East India House books. In the early eighteenth century, an accountant was specially appointed to review and audit the Asian books and report to the Committee of the Treasury and the Court of Directors. The loss of the Indian accounts previous to 1702-3 is once again explained by the reforms of the early eighteenth century and the consolidation of the records of the two separate companies after the merger. The books dating from 1702 or after had a practical use for the managerial committees. The coverage of information in the Asian books is almost as detailed as in the London ones. The name of every merchant doing business with the Company is given together with all the details of the transactions. The piece-goods trade is particularly well-documented, and we know the grades, the subtypes, the quantities, dimensions, the quality, prices, the delivery dates, and the names of the suppliers. Both the contracts and the actual deliveries are enumerated in full. Other headings cover the Company's port-to-port trade in raw cotton and foodgrains, the sale of European goods, transhipment of treasure from one Presidency to another, invoices of the inward and outward shipping, and establishment charges.

Accuracy and the reliability of the account books

There is no doubt whatsoever that the information found in the Commerce Journals and Ledger Books is absolutely reliable. For example, when the Company's own entries on bullion supplied by Edward Backwell, the great Restoration banker and financier, are compared with those in his account books, they are found to be identical to the smallest denominations. The invoices of ships entered separately and at different points of time in the Asian and London books, respectively, never vary even in the smallest detail. The arithmetical errors in the central books are equally rare, and any statistical reconstruction of the East India Company's trade based on these sources can be taken as being highly dependable. The only cautionary note concerns the reliability of the Asian account books. The auditors in London frequently drew attention to the careless way in which these were sometimes drawn up and there were of course many deliberate false entries covering-up direct embezzlement of funds. The most common practice of partial defraudment in the Indies was to enter large sums of money in the name of fictitious Asian merchants as advance payment for goods and use the money to finance the private trade of the servants. Obviously the Asian account books need to be used with care if one is interested in the overall financial position of the

individual factories. The other fundamental problem for the historian using these records lies in mastering the contemporaneous accounting concepts, which differ considerably from modern usage, even where the system as a whole was similar. But there is little difficulty, at least after 1709, in recording the individual entries. Data which have a general economic application, such as prices of commodities, of course need to be used with care not only because of their special character but also because there was considerable scope for distorting them in the Indies by unscrupulous servants.

Data processing and computerisation

The main obstacle to a successful presentation of the quantitative material in the Company's records is the sheer volume and size of the task. The account books run into hundreds of volumes with several millions of individual entries. Even after the system of book-keeping has been mastered and the meaning of the entries understood, there remains the formidable problem of copying and processing into more manageable form the disaggregated data. Fortunately the possibility of machine processing made it a much more feasible project, and the methods of compiling the statistical series in the tables are entirely based on automatic calculations. The basic system followed in the quantitative research was a simple one and consisted of two stages. The first part of the programme was to tabulate annual quantities in the archival location (India Office Records) on an electronic desk calculating machine. These tables were copied by hand on to the standard computer coding sheets and later punched on machine-readable cards. The final computer programs were written in FORTRAN in order to produce the tables and the whole project was carried out at the University of London Computer Centre, using a configuration of Control Data 6400, 6600, and 7600 machines. The tables were produced in the form of line-printing, punched cards, and microfilms. From this basic pool of processed data, available in machine-readable form, it was possible to draw selected sample series for further statistical analysis. The pictorial graphs were all produced on the microfilming graph-plotter at the Centre. On the whole the data processing presented little difficulty, though the total number of punched cards was very large. The special programs written for the project ran on the computer without any problems and were used over a period of four years for subsequent changes and modifications to the data specifications.

The plan and problems of tabulation

Perhaps the most difficult part of any kind of computerised research is to draw up an overall plan or model showing all the details that are to be incorporated in the final work. The general aim was to construct annual time-series on the Company's exports and imports, disaggregated by regions and commodities. The method for compiling the figures for annual totals was to trace the invoice of every ship going to and returning from the Indies and draw up an annual shipping list of outward and inward sailings. The collection, summing, and classification of individual commodities followed from

this fundamental initial step. The main difficulty in deriving the annual figures is of course to decide what constitutes 'one year'. The East India Company did not use the calendar year, and in its account books the New Year began from April and ended in March. However, the accounting year, the dates for striking the annual balances, ran from i July to 30 June of the following year. For exports from London the shipping season from July to June was taken as the relevant unit. In the statistical tables, exports for 1659-60 appear as 1660. It must be remembered that the greater number of ships on the outward voyage sailed between November and April. For imports from Asia for the period from 1664 to 1705 the year was taken from April to the following March (as this was then the convention in the Ledger Books). But from 1705 to 1760 the standard practice of July to the following June was adopted as the accounting year. Needless to say the selection of definite cut-off points does not solve the problem of what to do when a particular ship is delayed by a few weeks. To include it in the next year would obviously distort the reality, for the Company always took a flexible attitude itself. In these borderline cases it was necessary to use a certain amount of interpretative latitude rather than follow the rules rigidly. In classifying the commodities, some forty different classes of goods were identified which were to appear separately in the total trade matrix for computer analysis, and these were further subdivided into six operating regions (Mokha, Bombay, Madras, Bengal, South East Asia, and China). Within these separate commodities there were further classifications. The Indian textiles, for example, were divided into ninety different subtypes. The data were processed under the following headings, annual quantities, values, unit prices, percentage share in total value or the regional share, quantities of goods sold and their sale value, unit sale price, and the ratio of cost price to sale price. It should be noted that the data for the sales in London are available only up to 1705. The detailed flow-chart of the computer program design and the list of commodities is given at the end of this Appendix (p. 473). Out of the original 269 tables printed out by the computer it was only possible to include the most important series in the present work. (See note on p. 476.)

The margin of errors

There are two possible sources of errors in the tables. The first is the error in copying the figures from the original records, as these were being tabulated on the calculating machine. The second comes from the process of selection. The total value of imports, for example, is derived by summing the values of the selected items in the invoice and assigning the ones not selected to the item under miscellaneous, and some small items are ignored altogether. But in the case of exports to Asia, the list in the tables is comprehensive, i.e. it comprises all the commodities on the invoice including stores. In the case of imports from Asia, the totals would differ from the total values calculated by aggregating the invoice values given in the account books for each ship, which include handling and miscellaneous charges. This difference would be in a downward direction, and the figures for import values probably undervalue the Company's totals by 2-5 per cent for the period as a whole.

The basis for deriving the import totals can be checked from the list of commodities given under the heading 'Imports from Asia' at the end of this Appendix (p. 475). The computer program summed the values under all these items in order to calculate the final totals.

The difference and variations between these tables and other previous figures

A comparison between the figures presented here and those given by Bal Krishna in his *Commercial relations between India and England 1601-1J5J* or W. R. Scott's *Joint-stock companies* reveals substantial differences. Scott gives some figures for the years from 1667-8 to 1685 in vol. II, p. 137, which are taken from John Bruce, *Annals of the East India Company,* and the State Papers Domestic James II. The difference here is almost certainly the result of the different way of calculating the totals for one year. As the *level* or *base* is very small the inclusion or deletion of even one ship from one particular year makes a considerable difference. Bal Krishna gives three separate sets of figures, his own shipping list (p. 345 onwards in his book), export figures on p. 296, and Customs House figures on p. 298, Appendices A and C. One notices at once that in the shipping list two columns are given under *money* and *goods.* The figures under goods column of course are not really for goods alone. They are the total values including treasure. Bal Krishna has consistently double-counted the treasure. He does not tell us how the figures on p. 298 were compiled, although I think that the difference between his figures and these ones is once again because of the different way of calculating the shipping list. No specific source is also mentioned for his figures from the Customs House in Appendix C. We do not know whether these include the exports of both the old East India Company and the New Company founded in 1698 as well as the exports of licensed separate traders. It is very likely that the latter is the case. The figures given in this work never include the trade of the New East India Company which had its own separate accounts between 1698 and 1702. There are various sets of figures on the East India trade in the Parliamentary Papers dating from the eighteenth century. It must be remembered that these were compiled at later dates on the basis of official estimates of the Company's exports and sometimes from the returns provided by the Company itself. The Company's Accountants of course had access to the old account books, though it would have required considerable research to compile any kind of annual totals for them as the Company did not do this as a matter of regular routine. It is also possible that the true figures are not always passed on to the government unless it suited the Company's purpose, and there was a great deal of obvious 'window dressing' in the official figures; but here again there were exceptions. In the case of the tea trade, the Company had a direct interest in making the true figures public and its printed tables relating to the total sales or imports reflect a high degree of accuracy. Finally there is the question of the discrepancy between the Company's figures as given in the Ledger Books and Commerce Journals and those compiled by the inspector-general for the Customs Ledgers in the Public Records office. The publication of a selection of these official returns in E. B. Schumpeter, *English overseas trade statistics i6gj-i8o8* has made available

to historians some sort of quantitative estimation of the value of English foreign trade. However, it is clear from a comparison of the present figures and the customs statistics that the latter suffer from two major defects: *(a)* underenumeration, and *(b)* the averaging error in the construction of price indices. The first could have been because of accidental oversight or the failure of the exporters and importers to supply the inspector-general's office with comprehensive returns. The re-export figures are particularly incomplete and fragmentary, but even for imports which appear both in the East India Company's account books and the Customs Ledgers, there were individual years when the Company's figures exceed the official ones. The reason for the second defect is more easily explained. In deriving the value figures, it was the practice of the Customs Department to multiply the quantities by an index of prices, which was an average of the cost or landed import prices and the much higher sales prices in England. The result was an automatic overvaluation of the imports and undervaluation of the re-exports.

Methods of interpolation of missing values or incomplete figures

With the Company's exports to Asia the question of missing values does not arise, as the figures are always given in full in the account books. Even when there are occasional breaks in the series (as a result of the loss of one particular set of books during 1674-5) the figures are available separately in the Home Miscellaneous Series or the Despatch Books. But the problem is a little more complicated with the imports from Asia. There is a major break in the entries from 1683 to about 1705. This was a period of internal strife and much public agitation against the legal Company which ended in official encouragement for the foundation of the New East India Company. After the merger of the two organisations in 1702 and the consolidation of their commercial accounts in 1705 the entries gradually resume their comprehensive character and there is little difficulty in obtaining the detailed breakdown of the various different commodities. Although the shipping invoices for the imports during the period from 1683 to 1705 are not always complete or as full as before, the data for the main commodities are nearly always given. What are sometimes missing are the values of the commodities. Where quantities are missing, these can be obtained from the freight accounts which enumerate them in detail. For missing values the simple method of using the previous year's price as a multiplier was adopted. The main casualty during the disturbed period of trade was the Indian textiles which cease to be differentiated separately for each subtype. In the present tables the totals are taken from the shipping invoices as usual. The figures for tea imports require a brief word of explanation. Tea was imported from a number of different sources in the Far East and South East Asia before 1713 when Canton became the sole supplier of tea to the European trading companies. After this date the figures given in the Commerce Journals always distinguish between the different types of green and black teas imported by the English East India Company. But there are two exceptional cases: in 1728-9 and 1729-30 no breakdowns were given. For 1728, however, the Canton Diary records the

chests and quantities of every kind of tea shipped on board the Company's ships and the total of these correspond closely to the total figure in the Commerce Journal. The figures for the individual types of tea are taken from the Canton Diary of 1728. For 1729 it has been assumed that the total tea imports found in the short shipping invoice in the Commerce Journal are green tea (Singlo), as the Company was only interested in buying this type in these years.

Quantities given in the account books

All weights and measures in the account books are *net* quantities, excluding the *tare* (or weight of packaging). This is particular important for tea, which had fairly bulky packing cases. The Asian weights were converted into English weights according to the conversion factors given below, which were conventional equivalents followed by the Company.

Currency

The unit of currency in the account books followed the convention of the trading regions. Thus in London £ 1 sterling = 20s = 24od. In India the rupee was the standard money of account for Gujarat, Bengal, and northern India. But in south India and Madras the unit was the pagoda, a gold coin. In Mokha it was either the Spanish dollar (the reale of eight) or the 'country dollar[5]. In South East Asia it was always the Spanish dollar and in China the tale. The conversion rates were standardised by the East India Company and are given below.

1660-76	1 rupee = 2s 6d
1677-1705	1 rupee = 2s 3d
1706-60	1 rupee = 2s 6d
1660-77	* pagoda = 8s
1678-1705	1 pagoda = gs
1706-60	1 pagoda = 8s
1660-1760	1 tale = 6s 8d (tale was a Chinese weight)
	121 Mokha dollars = 100 Spanish dollars
	1 Spanish dollar = 5s

Currency weights and standards

I2oz = 1 lbTroy
20 dwt = 1 oz
24 grains = 1 dwt
20 mites = 1 grain
37 parts = 1 mite
1 Troyoz = 31.10 gram
1 standard oz of silver = 222 dwt of pure silver + 18 dwt of alloy
= 28.7675 gram of pure silver -f 2.3325 gram of alloy

Weights

i English pound (lb) = i6oz = 0.454 kg

1 English great pound = 24 oz = 0.681 kg

(*Note:* raw silks were always measured in great lb)

112 English pounds = 1 hundredweight (cwt) = 50.848 kg

(*Note:* saltpetre is measured in cwt)

1 English ton = 20 cwt = 22401b = 1016.96 kg

1 Bengal maund = 40 seers = 75 lb = 34.05 kg

1 Surat maund = 40 seers = 281b = 12.712 kg

1 Surat *candy* = 6 cwt = 672 lb = 305.088 kg

1 Madras candy = 4.37 cwt = 489.441b = 222.205 kg

1 Mokhabahar = 4501b = 204.3 kg

1 Beit el-Fakih bahar = 8141b = 369.556 kg

1 picul (Chinese weight) = 133*5 lb = 60.382 kg

Linear measures

1 English yard = 0.914 metre

1 piece of Indian cotton textile = average *i*\ yard wide, 15 yards long
= 1.14 metre wide, 13.71 metres long

1 *whole* broadcloth (English) = \\ yard wide, 46-8 yards long

1 *piece* of broadcloth (English) = \\ yard wide, 23-4 yards long

FLOW CHART

Flow chart used in tabulating and compiling the East India Company's trade statistics 1660-1J60

I. Company's imports from Asia

A. Primary processing

1 Identify each geographical area of trade: Mokha, Bombay/Surat, Madras, Bengal, South East Asia, and China

2 Identify each commodity and subgroup within each category

(i) derive quantities

(ii) derive values

(iii) sum quantities and values for each subgroup for each trading area

3 Derive total value of trade for each trading area

4 Derive total value of trade for all trading areas

B. Secondary processing

1 Construct index number of total volume and value of trade

2 Convert weights and measures and currency units into uniform series

3 Calculate percentage share of each commodity in total value and of each trading area

4 Calculate unit price by deflating values by volume figures

II. Company's imports from Asia: sales

A. Primary processing

i Derive figures under categories 2 and 4 as in Section LA above

B. Secondary processing

1 Calculate an index of mark-up or the ratio of sale price to cost price; lag cost price by 2 years

III. Company's imports from Asia: orders sent out from London

1 Derive figures under category 1 in Section LA

IV. Company's imports from Asia: shipping list

1 Identify each trading area as in 1, Section LA

2 List incoming ships for each year under the following headings

(i) date of departure

(ii) date of arrival

(iii) the names of ship

(iv) the value of cargo

(v) freight paid for the voyage

(vi) tonnage

V. Company's exports to Asia

A. Primary processing

1 Identify each trading area under the following headings

(i) Mokha

(ii) Bombay/Surat

(iii) Madras

(iv) Bengal/Calcutta

(v) South East Asia/Bantam, Bencoolen etc.
(vi) China
(vii) Borneo
(viii) StHellena

2 Identify each export commodity under the following headings
(i) Broadcloth
(ii) Other cloth of lighter types
(iii) Iron
(iv) Lead
(v) Copper
(vi) Mercury
(vii) Tin
(viii) Coral
(ix) Ivory
(x) Stores
(xi) Miscellaneous

3 Identify treasure under the following headings
(i) Gold
(ii) Silver under the following subgroups: bar silver, Mexican reales of 8, Pillar reales of 8, Cruzadoes, Rix dollars, Ducatoons, French crowns, French dollars, miscellaneous

4 Derive total annual quantities and values for each trading area for all commodities including treasure

5 Derive total annual values for all trading areas

B. Secondary processing

1 Calculate percentage share of each commodity in total value and of each trading area

2 Construct index number of total volume and value of trade

3 Calculate unit price by deflating values by volume figures

VI. Company's exports to Asia: shipping list

i As in Section IV

VII. Company's suppliers of treasure

1 Names of the suppliers

2 Place of origin

3 Date of transactions

4 Amounts supplied

5 Bills of exchange drawn from foreign centres and purchased in London

List of commodities included in the Company's total imports and exports

Imports from Asia

1 Alloes
2 Benjamin
3 Cardamon
4 Carmania wool
5 Cassia lignum
6 China root
7* Chinaware
8* Coffee
9 Copper (Japanese)
10 Cotton yarn
11 Cowries
12 Diamonds
13 Floretta yarn
14 Green ginger
15* Indigo
16 Musk
17 Myrrh
18 Olibanum
19* Pepper
20 Redwood
21* Saltpetre
22 Sappan and sandal wood
23 Seedlack
24 Shellack
25* Raw silk
26 Sticklack
27 Sugar
28* Textiles from Bombay
29* Textiles from Madras
30* Textiles from Bengal
31* Textiles from China
32* Tea Bing
33* Tea Bohea
34* Tea Congou
35* Tea Heyson
36* Tea Pekoe
37* Tea Singlo
38* Tea Souchon
39 Tincal
40 Turmeric
41 Miscellaneous

Exports to Asia

1* Broadcloth
2* Other cloth of lighter types
3 Coral
4 Copper
5 Iron
6 Ivory
7* Lead
8 Mercury
9 Tin
10 Miscellaneous
11 Silver
12 Gold

*** Indicates commodities reproduced in tabular form in Appendix 5.**

Textile sub-types tabulated separately from the provinces of Gujarat, Konkan, and Malabar

1 Bafta (narrow)
2 Bafta (broad)
3 Boralchowders
4 Brawles
5 Cheiloes
6 Chintz (narrow)
7 Chintz (broad)
8 Derebands
9 Dungarees
10 Guinea stuffs
11 Mercoolees
12 Nicannees
13 Byrampauts
14 Lemanees
15 Pautkeys
16 Quilts (narrow)
17 Quilts (broad)
18 Sallowes
19 Sovaguzzies
20 Bombay stuffs
21 Tapseils
22 Long cloth from Malabar

23 Sallampores from Malabar
24 Pallampores
25 Bejutapauts
26 Negapauts

From the coast ofCoromandel

27 Allejaes
28 Bettelles
29 Gollowaypoos
30 Chintz
31 Diapers
32 Dungarees
33 Ginghams
34 Izarees
35 Long cloth
36 Moorees
37 Percalles
38 Romalls
39 Sacerguntees
40 Saderancheras
41 Sallampores
42 Sail cloth

From Bengal, Bihar, and Orissa

43 Addaties
44 Allibannies
45 Alliballies
46 Atchabannies
47 Bandannoes
48 Bafta
49 Garridarries
50 Gherconnaes
51 Ghillaes
52 Ghintz
53 Ghowtars
54 Goopees
55 Gushtaes
56 Ghucklaes
57 Guttanees
58 Gossaes
59 Dysooksies
60 Doreas
61 Dimitties
62 Dosooties
63 Elatches
64 Emerties
65 Ginghams
66 Gurrahs
67 Handkerchieves
68 Humhums
69 Jamdannees
70 Jamwars
71 Lacowries
72 Mulmuls
73 Nainsooks
74 Nillaes
75 Photaes
76 Peniascoes
77 Romalls
78 Silk Lungees
79 Silk Lungee Romalls
80 Sannoes
81 Shalbafts
82 Seerhaudconnaes
83 Seerbettees
84 Seerbands
85 Seersuckers
86 Sooseys
87 Taffetas
88 Tanjeebs
89 Terrindams
90 Tepoys
91 Miscellaneous

Note. Complete statistical tables on the imports, exports, and the cotton textiles listed on pp. 475-6 are available in microforms, as also data on the outward and inward shipping and freight costs. The statistical tables are exhaustively annotated to show the methods of calculations, the missing values, and incomplete data.

Appendix 2

TIME-SERIES ANALYSIS OF THE EAST INDIA COMPANY'S EXPORTS AND IMPORTS

In Chapter 5 were presented the main results of the statistical analysis of the Company's exports and imports in terms of explicit temporal changes. The behaviour of a discrete or continuous series over time can be analysed from a number of different points of investigations. Here we are interested in the dependence of the observations on their own successive values or on those of another related series. The first question raised in Chapter 5 related to the correspondence between the Company's exports and imports during the period between 1660 and 1760. The concept of input and output developed in Chapter 2 enables us to present the imports T_t as output from the exports X_t series of inputs. The relationship might be expressed in the form of a linear filter.

$$\boldsymbol{r_t = v_0 x_t + v_1 x_{t-1} + v_2 x_{t-2} = \ldots} \qquad \textbf{(2.1)}$$

But for the purpose of estimating the relationship between the two variables the following less complex equation form was chosen.

$$T_t = a + bX_{t-2} \qquad (2.2)$$

In order to extract the trend components and eliminate the random fluctuations, we adopted two methods, that of a three-year moving average and the linear trend based on least-squares curve fitting. The choice of a three-year moving average was influenced by the fact that this was the time-period for each unit of investment to reach completion and hence it forms a natural decision-period. The equations used are of the following form

$$\boldsymbol{r_t = a + b_1 r_t + b_2 r^2_{t \cdot 1} + b_3 r^3_{t \cdot 2}} \qquad \textbf{(2.3)}$$

$$T_t = a + bT, \quad \text{where } T = \text{time} \qquad (2.4)$$

As a variation of the linear time model, we also attempted to fit the formula of an exponential growth curve to measure the annual compound rate of change, using the following equation and its linearised version.

$$T_t = A\,e^{rt} \quad \text{where} \quad r = \text{rate of growth} \qquad (^{2}»5)$$
$$t = \text{time-periods}$$
$$A = \text{constant}$$

$$\text{logr, = log\^{} + r/} \qquad (2.6)$$

The coefficients of the linear equation (2.2), the regression of imports on the lagged value of the exports are as follows.

$$T_t = 83088.4913 + 0.7245\text{^-2} \qquad (2.7)$$

lvalues 2.86 15.05

$R^2 = 0.7046$ j?^{2} = 0.7015 D.W. = 1.2685

The above results indicate a good fit of the data, as R^2 is fairly high and the *t* value is significant at 1 per cent level. But the main weakness of the model is the value obtained for Durbin-Watson statistics (D.W.) which indicates positive serial correlation in the residuals. From present knowledge of the general trading conditions, we could postulate that the changes in imports would be susceptible to factors additional to the level of exports. Hence the effect of the omitted variables is showing up in the form of serial correlation of errors. However, the similarity in the time-profile of the two series is confirmed by the results of fitting equations (2.4) and (2.6) singly to each, as we can see from the Tables B2.1-4. Once again the data provide a good fit, the only exception being the period from 1684 to 1699. The standard error of the time-periods is fairly small and the *t* values are highly significant. It is also clear, however, that the linear trend model gives better results than the exponential growth model. The presence of serial correlations in the trend equations, as shown by the low values of Durbin-Watson statistics, suggest the presence in the residuals of some systematic factors which may be business cycles.

In order to distinguish between short-term fluctuations and regular or irregular oscillations it is necessary to carry out further tests; for we cannot rule out the possibility that the periodicity which is evident from the diagrams of the exports and imports, when plotted in the form of a third-degree polynomial series, is the result of the process of moving average itself or that it is caused by a summation of the random elements.[1] An autoregressive model of the following form may succeed in isolating the regular cycles from random fluctuations.

$$U_t = a_1 U_{t\cdot 1} + a_2 U_{t\cdot 2} + e \qquad (2.8)$$

where U_t = residuals after the removal of linear trend as in (2.4). This is a second-order difference equation which is used for actual estimation. Autoregressive series can also be written in a generalised form

$$\sum_{j=0}^{h} Yj\text{^}jUf\text{-}j \sim {}^e t \qquad \text{where } e_t \text{ is a random variable} \qquad (2.9)$$

with normal distribution and constant variance. When equation (2.8) is fitted to the values of the Company's total imports and exports by least-squares, after removing the linear trend, the following results are obtained:

$$\text{Imports } U_t = 0.69047\text{£/,_!} + 0.00329U_{t_2} \qquad (2.10)$$

$$\text{Exports } U_t = 0.53409\text{^/^!} + \text{o.i5996C/,}_{_2} \qquad (2.11)$$

There are two possible ways in which the results of the above equations can be utilised. The coefficients can be further analysed mathematically to see if there is an element of periodicity in the two series, and secondly, the values generated by equations (2.10) and (2.11) can be plotted in the form of diagrams for visual inspection. It is clear that for imports the first lagged

term is much more important than the second. But in the export equation the values obtained in a period of two years previous to the current period still exercised a significant influence. The autocorrelations calculated in (2.10) and (2.11) can be analysed by using *Tule-Walker equations.*[2]

$$\rho_1 + \alpha_1 + \alpha_2\rho_1 = 0 \quad (2.12)$$
$$\rho_2 + \alpha_1\rho_1 + \alpha_2 = 0 \quad (2.13)$$

$$\rho_1 = -\frac{\alpha_1}{1+\alpha_2} \quad (2.14)$$

$$\rho_2 = -\alpha_2 + \frac{\alpha_1^2}{1+\alpha_2} \quad (2.15)$$

$$\alpha_1 = -\frac{\rho_1(1-\rho_2)}{1-\rho_1^2} \quad (2.16)$$

$$\alpha_2 = -\frac{\rho_2-\rho_1^2}{1-\rho_1^2} \quad (2.17)$$

When $\alpha_1^2+4\alpha_2>0$ the autocorrelation function is a mixture of damped exponentials; but when $\alpha_1^2+4\alpha_2<0$ the roots of the difference equation are conjugate complex and the second-order autogressive process shows *pseudo periodic behaviour.*[3] The *damped sine wave* with *damping* factor *d*, *frequency* f_0 and *phase* F:

$$\rho_k = \frac{[\pm(\alpha_1)]^k d^k \sin(2\pi f_0 k + F)}{\sin F} \quad (2.18)$$

$$d = \sqrt{(-\alpha_2)} \quad (2.19)$$

$$\cos 2\pi f_0 = \frac{\alpha_1}{2\sqrt{(-\alpha_2)}} \quad (2.20)$$

For imports $\alpha_1 = 1.315235, \quad \alpha_2 = -0.9048403$

$\alpha_1 + 4\alpha_2 = -2.3041262$

Therefore $d = 0.95$

$\cos 2\pi f_0 = 0.69$

$$f_0 = \frac{\cos^{-1} 0.69}{2\pi}$$

$$= \frac{1}{7.78} \quad (2.21)$$

For exports $\alpha_1 = 0.6294279, \quad \alpha_2 = -0.176721$

$\alpha_1 + 4\alpha_2 = -0.0774561$

Therefore $d = 0.42$

$\cos 2\pi f_0 = 0.75$

$$f_0 = \frac{\cos^{-1} 0.75}{2\pi}$$

$$= \frac{1}{8.69} \quad (2.22)$$

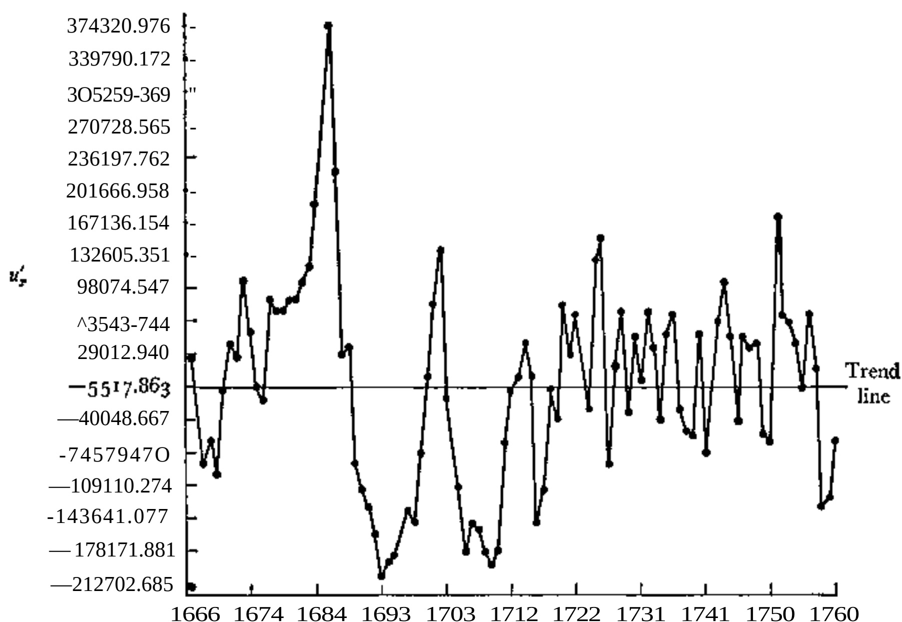


Figure A.2.1. Estimation of residuals after trend removal. Imports: $U_T = 0.69047\, U_{t-1} + 0.00329\, U_{t-2}$.

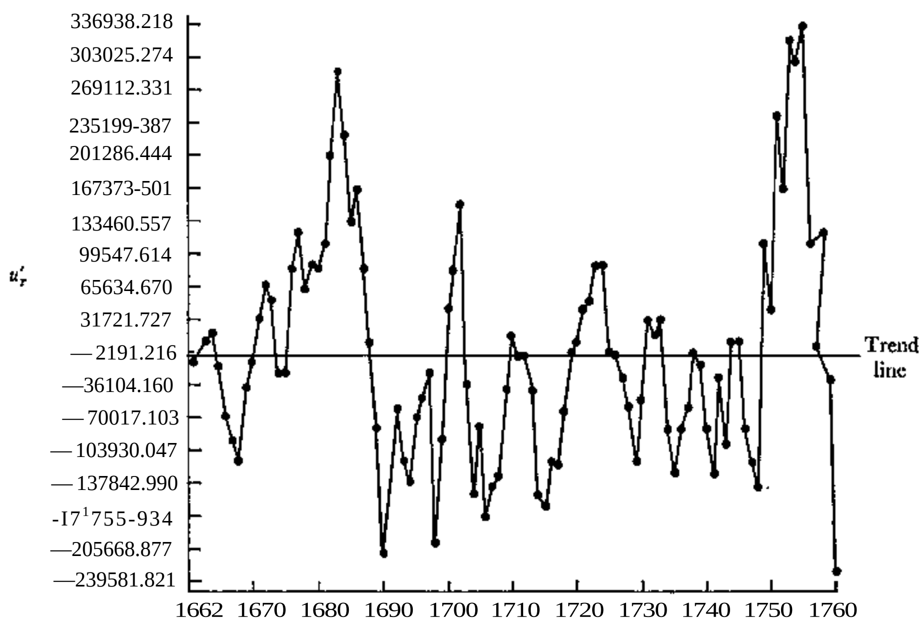


Figure A.2.2. Estimation of residuals after trend removal. Exports: $U_T = 0.53490 U_{t-1} + 0.15996 U_{t-2}$

The results of the mathematical analysis confirm that for imports there is a fundamental periodicity of 7.78 years (2.21) and for exports of 8.69 years (2.22). Both the series dampen out over time. But these conclusions, it must be remembered, relate purely to the physical characteristics of the time-series in so far as they are approximated by the two equations (2.10) and (2.11). We do not know the causal mechanism behind them. However, it can be seen from Figures A.2.1-A.2.2 that the values generated by equations (2.10) and (2.11) follow fairly closely the graphs of the original series (see Figures 3, 5). The time-profile of the generated import series in particular undergoes a dramatic transformation from 1705 onwards. We can detect a general dampening in amplitude along with an increase in the number of cycles. The tendency of the series to converge towards the trend values is strongly evident after 1720, and the only noticeably high peak occurs in the 1750s. The export residuals as calculated by equation (2.11) follow a similar pattern but in a slightly more complex fashion. On the whole the statistical analysis of the imports and exports enables us to say that the strong secular trend over time in both was accompanied by shorter oscillations of seven to eight years.

Table B.2.1. *Import time trends*

Equation No.	Model form	Period	
1	Linear	1664-1760	$T_t = 96023.9008 + 7493.5345T$ $t = [3.07] \quad [13.51]$
2	Exponential	1664-1760	$T'_t = 11.6079 + 0.0234T$ $t = [76.69] \quad [8.73]$
3	Linear	1664-84	$T_t = -9238.9143 + 25430.9922T$ $t = [-0.21] \quad [7.28]$
4	Exponential	1664-84	$T'_t = 10.4955 + 0.1437T$ $t = [23.57] \quad [4.05]$
5	Linear	1685-99	$T_t = 522463.7357 + -11354.3357T$ $t = [1.94] \quad [-1.23]$
6	Exponential	1685-99	$T'_t = 13.3227 + -0.0514T$ $t = [8.32] \quad [-0.94]$
7	Linear	1700-24	$T_t = -361223.3608 + 16084.2513T$ $t = [-1.78] \quad [3.93]$
8	Exponential	1700-24	$T'_t = 10.8692 + 0.0405T$ $t = [19.39] \quad [3.58]$
9	Linear	1725-60	$T = 240017.8513 + 5953.6888T$ $t = [1.87] \quad [3.72]$
10	Exponential	1725-60	$T'_t = 12.7776 + 0.0086T$ $t = [7049] \quad [3.82]$

Note: The figures within square brackets are the values for Student-t distribution. The prime indicates log values (natural).

Table B.2.2. *Summary of statistics in import time trends*

Equation No.	R^2	Durbin-Watson statistics	Standard error of time
1	0.6578	0.6548	554.4682
2	0.4449	0.8690	0.0027
3	0.7363	0.9915	3491.4112
4	0.4635	1.8378	0.0355
5	0.1050	0.4911	9196.4418
6	0.0638	0.6887	0.0546
7	0.4021	0.6399	4089.9802
8	0.3580	O.537I	0.0113
9	0.2894	1.7850	1600.0779
10	0.3005	1.7642	0.0023

Table B.2.3. *Export time trends*

Equation No.	Model form	Period	
i	Linear	i660-1760	T_t= 109 796.5133 + 7 968.2497 T '=[2.91] [12.42]
2	Exponential	1660-1760	T'_t = 11.8223+0.0208 T t = [82.41] [8.53]
3	Linear	1660-83	T_t= — 2O658.I739+24275-5739T t = [-0.51] [8.59]
4	Exponential	1660-83	T'_t = 10.9599+0.1013T * = [38.94] [5.14]
5	Linear	1684-99	Ft = 433697 + —4103.4662T *=[i-33] [-0.41]
6	Exponential	1684-99	$T't$— 11.9491 +0.0070 T *=[4-93] [0.10]
7	Linear	1700-23	Tt — —180942.4667+12 716.8700T t = [-0.81] [3.00]
8	Exponential	1700-23	T'_t = 11.5656+0.02 79 T t = [22.54] [2.88]
9	Linear	1724-60	T_t= -244153.589142 +12339.5346 T t= [-0.87] [3.68]
10	Exponential	1724-60	$T't$— 12,3510+0.0141 T t = [37-86] [3.62]

Note: The figures within square brackets are the values for Student-/ distribution. The prime indicates log values (natural).

Table 8.2.4. ***Summary of statistics in export time trends***

Equation No.	R^2	Durbin-Watson statistics	Standard error of time
1	0.6091	O-7573	641.4981
2	0.4237	0.9254	0.0024
3	0.7702	0.9135	2826.8422
4	0-5459	1.0865	0.0197
5	**0.0120**	1.1149	9962.1430
6	0.0006	1.2146	0.0740
7	0.2907	0.8083	4234.9310
8	0.2741	1.0217	0.0097
9	0.2791	0.9220	3352.3O47
10	0.2725	0.8911	0.0040

Appendix 3

THE ECONOMETRIC ESTIMATION OF THE TRADING MODEL

The general issues

The abundance of quantitative material that yielded the detailed and precise analysis of the trends and fluctuations of the East India Company's trade also permits the statistical reconstruction to be taken a step further. The similarity in the time-profile of the Company's exports and imports, examined in the preceding section, raises the obvious problem of postulating the true functional relationship between the two variables. It was found earlier that the direction and magnitude of the changes in the values of the dependent variable (imports) were a function of the changes in the exports. But the statistical results also demonstrated that the imports were not solely influenced by the level of exports and that other causal forces were likely to be operating as well. The previous analysis attempted to explain the variations in the imports, but the form in which the hypothesised relationship was expressed did not enable us to answer the separate question of why year-to-year fluctuations take place in the independent variable (exports). In order to solve this particular problem it is necessary to formulate a second equation or a complete set of relationships which would take into account the whole range of the Company's trading operations. From the minutes and the outward letters of the Court of Directors, we know that the Company's decision-makers had their own rules for determining the volume of trade and they were sensitive to exogenous economic indicators. The Court Minutes frequently mention that the various subcommittees were being convened in order to decide on the level of the Company's exports for the ensuing shipping season. For example, in 1730 the subcommittees summoned were those of Correspondence, Buying, Shipping, Treasure, and Warehouses. The amount of funds to be allocated to particular factories in Asia was of course directly related to the volume of imports which the Company wished to be returned from the Indies. Unfortunately, the exact nature of the calculations is seldom explicitly stated in the records. All that we hear is the Company's extreme concern with the level of variable and fixed costs and their effects on profits, or the vital necessity of making as large returns as possible from the Asian settlements. It was emphasised that the revenue from the sale of the imports alone would make it possible to enlarge the trading capital at a subsequent period. General statements such as these were addressed to all parts of India where the Company had commercial dealings. The close connection between the cost price of the imported goods, the profitability of the trade, and the Company's general financial condition is amply clear from the qualitative material. But we do not know from the surviving documents to

what extent the quantitative relationships between these elements or variables influenced the decision of the Court of Directors about the direction of trade. One way of solving these uncertain questions is to use the technique of statistical estimation and inference. The coefficients of the estimated relationships in the model then provide us with at least some indication of the validity of the theoretical reasoning or the difference between the Company's intended planning and execution.

The specification of the model

Among the whole range of the East India Company's commercial and financial activities, it is possible to isolate two basic variables whose aggregate movements fundamentally determined the changes in all the other time-series. The annual level of the export values sent out from London represented the demand for East India goods made by the Court of Directors, which was derived from its assessment of the present and future market trends in Europe. The total volume of imports on the other hand was a function of the prevailing prices in the Indies and the amount of funds available for their purchase. The decision on the first variable rested with the central controlling body in London; on the second with the subordinate operational management in Asia. Each group was free to vary their objectives within certain limits. It is also obvious that apart from the systematic components embedded in the trading system of the Company, the annual fluctuations in the two series could be caused by purely random external shocks. Along with wars, the periodical droughts and famines in India were strong causal candidates for such interruptions. The interdependence between total exports and the volume of imports with suitable time-lags is evident from the available qualitative information, but other major economic variables - the sales revenue, the level of profits, dividend payments, the margin of liquidity-to-reserve ratio - were all connected vitally to what happened in the case of the aggregate commercial series. Having identified these two structural relationships, our next task is to formulate them in a mathematical form that can be tested with the standard statistical techniques. The exact equations and their estimated parameters are presented in Table B.3.1, p. 489; here for ease of comprehension the various parts of the trading model are merely described as a series of hypothesis. Apart from the behaviour of the total exports and imports, the model incorporates three other relationships which played a critical part in the Company's internal decisions. These are the level of costs, the variations in the rates of profits, and the total sales function. The following statements describe each of the equations that are statistically tested in various alternative forms.

(3.1) The variations in the *values* of the exports are a function in proportionate terms of the changes in the average costs, net earnings, the amount of bills of exchange drawn on the Company from India, and the volume of imports during the previous time-period.

(3.2) The variations in the values of the exports are a function in proportionate terms of the changes in the average costs as represented by an aggregate index of the cost price of the imported goods and the volume of orders

sent out from London during the appropriate time period. (This is an alternative to hypothesis (3.1).)

(3.3) The variations in the total *volume* of the imports are a function in proportionate terms of the changes in the current prices of the imported goods, the amount of funds available for their purchase, and time itself.

(3.4) The average costs are a decreasing function of the volume of trade and of time.

(3.5) The average costs are a decreasing function of the volume of trade, the cost price of goods, and of time, with an associated level of fixed costs. (This is an alternative to hypothesis (3.4).)

(3.6) The rates of profits are a function of the average costs and the unit sale value of the imports.

(3.7) The variations in total sales are caused by variations in the volume of goods received from Asia, sales prices in London, and time.

Assumptions in the hypothesised relationships in the model

Before subjecting these structural relationships to statistical estimation, we had to determine the period and its length for which the calculations were to be made. It was clearly inadvisable to include the whole century of our study, as there would have been many fundamental changes in the market for the Company's trading products. It seemed desirable also to exclude prolonged periods of war which led to violent oscillations in the Company's trade. The most stable and representative years for our purpose appeared to date from 1710 to 1744 (see Chapter 3, p. 43). It is true that the first and the last few years of the period were characterised by Continental wars, but the total number of observations available for estimating the model from these terminal dates is so advantageous as to outweigh this minor objection. The general assumption behind the export function (3.1) is that the Court of Directors' demand curve in London for Asian imports can be approximated by a constant elasticity curve. An increase or decrease in the values of the four explanatory variables causes a proportionate change in the exports irrespective of the scale of the operations. Among the independent variables, the choice of the cost index and net earnings needs little comment. As it has been already mentioned, these were the considerations that are most frequently referred to in the Company's records. However, the inclusion of the other two variables, the bills of exchange and the lagged volume of imports, in (3.1) calls for some explanation. From the second decade of the eighteenth century, substantial sums were paid into the Company's various treasuries in India by private traders, and bills of exchange were issued against these funds repayable in London. The volume of the Indian bills became increasingly important as a source of providing purchasing-power to the Asian settlements. Although the Company did not explicitly mention the fact, we can assume that the amount of the bills of exchange should exercise an inverse influence on the total annual value of the exports. The role of the lagged import volume index is more obscure and perhaps also more questionable. It is clear that, if the exports represent the Company's demand for imports projected to the next time-period, the latter should take into account

the inventory of Asian goods in the warehouses. The Court of Directors in fact do refer to the stocks in the hands of the wholesalers having some influence on the auction prices in London; but the destruction of the Sales Ledgers has removed any possibility of reconstructing the level of inventory, and we can only proceed on the assumption that the proportion of stocks to total sales remains constant in our period of analysis, in which case the lagged imports can be used as a proxy for the true index of inventories.

It is possible that the causal mechanism suggested in (3.1) as a determinant of the Company's estimated capital requirements for the Asian factories is in reality too contrived. Let us for a moment return to the basic assumptions and take a look at the exact procedure followed by the Committee of Correspondence which was responsible for making the detailed calculations. The Committee held a series of meetings before the approach of the shipping season in the autumn and winter and aided by the accountants made an estimate of the total amount of goods which they wished to order from the Indies. The quantities of each variety of commodity, we assume, are influenced by their cost and profitability in the immediate past, as also by the level of stocks. It is in fact known that the Accountants supplied the Committee with the figures processed after the sales were over. From these calculations the members could judge for themselves the relative profitability of each line of goods, and decide how much to order. In general the annual order list drawn up by the Correspondence Committee was the most direct expression of the Company's demand for Asian imports, and its exclusion from the export function clearly makes it less than satisfactory. The alternative hypothesis (3.2) seeks to correct this omission, and it rests on the simpler assumption that the value of the exports is a function of the cost prices of imports, instead of the average unit costs, and the total number of textile pieces ordered, which is used as a substitute for the true order index. There is some difficulty in constructing an index of total orders, mainly because figures, other than for textiles, were not always systematically entered in the Despatch Books. As the textiles occupied a very high proportion of the total imports, we assume that the annual order list for cotton goods would serve as an adequate alternative. The use of proxy variables in the place of true and perfect sets of data is of course always questionable, and in this particular case the usefulness of the statistical analysis must always be qualified by the limitation of the data.

The reasoning suggested by the form of the import function (3.3) is that the Asian settlements regulate their purchase of import goods according to a downward sloping demand curve and the amount of funds available. The capital at the disposal of the Asian factories is composed of the European exports, both goods and treasure, sums paid into the local treasury against bills of exchange, and local borrowings. It is unfortunate that no regular time-series has survived on the latter, and we must assume that the supplementary purchasing-power created by an inflow of capital from Indian money market was essentially a temporary bridging operation dependent ultimately on the amount of funds received from London. The Asian purchases are linked to the Company's demand at home through the last item. There is a time trend in (3.3), and it signifies that the scale of the function

can shift upward or downward over time. It should be noted that (3.3) measures the changes in imports in terms of volume and not value as in the case of exports in (3.1-3.2). The next two relationships in the core model attempt to study the behaviour of the Company's costs in relation to the volume of trade and over time. Furthermore, the availability of quantitative information relating to the Company's financial operations makes it possible to suggest two further functions on the level of profits and sales (3.6-3.7). The rates of profits are assumed to depend on the variations of a cost index and the unit sale value of imports. The sale function (3.7) on the other hand is given by the simple identity that fluctuations in total revenue from this source are caused by changes in the volume of goods received from Asia and sales prices in London, respectively; the aim here is to break down the relative weight of the two factors.

The results and their interpretation

The results of the econometric analysis can be understood more easily if it is remembered that the techniques are designed to calculate a constant weight for each of the explanatory variables in the hypothesised relationship. When the particular values of these variables are multiplied by the computed weights and the results added together, it should give us the predicted value of the dependent variable. The success of the calculations (and of course the model) depends on minimising the difference between the predicted value and the true value. The constant weights also show the relative influence of the explanatory variables on the dependent variable when each one is considered separately with the values of the others held fixed. For the purpose of testing our model, we took all the variables specified in it for the period from 1710 to 1744, which gave thirty-five values for each series. The relative effect of the movements in each set of data on the dependent series was then studied and analysed with the help of econometric methods. Apart from computing the constants, these techniques also enable us to infer how much confidence we can attach to the results, and to see what the margin of error is between the predicted and the true values.

Explanation of symbols used in Table B.j. 1

* Indicates log values. The subscript $t \pm n$ indicates time-periods.

B_t = The annual value of bills of exchange drawn from Asia on the Company in London (as given in Table A.24, col. 7)

C_t = The index of costs,

$$\frac{TC_t}{V_t} \times P_t$$

E_t — The index of earnings (as given in Table A. 26, col. 4)

FC_t = The adjusted index of costs,

$$\frac{TC_t-(TCG_t+TCB_t)}{V_t} \times P_t$$

$0R_t$ = Total pieces of textiles ordered from London
P_t = The index of import prices (as given in Table A.3, col. 2)
PR_t = The annual rate of profits (as given in Table A.26, col. 10)
SL_t = Total sales receipts (as given in Table A.24, col. 12)
SP_t — The index of unit value of sales receipts, $SLJV_t$
T = Time
TC_t = Total costs (as given in Table A.24, °l- 9)
TCB_t = Total costs of bullion (as given in Table A.24, °l- 2)
TCG_t = Total costs of goods (as given in Table A.24, co^ l)
TN_t = The total outward shipping tonnage
V_t = The volume index of total imports (as given in Table A.3, col. 1)
X_t = Total export values
T_t = The total amount of investment funds available in Asia,

$$X_t + B_{t+1}$$

Table B.3.1. *The statistical results of estimating the trading model*

X_t* = 6.9068* +0.3396 Q_x* +0.0051 £¹f_1*+o.O9i9^f_1*+0.4301 Ff-!*
(4.07) (2.70) (0.81) (1.66) (2.11)
R^2 =0.5611 R^2 =0.5044 D.W. = 1.6031 F-St = 9.9(4,31)
(3-8)

X_t* = 5.9212* +0.0751 P_t* +0.5389 OR_t*
(4.98) (o.29| (6*29)
R^2 = 0.6052 R^2 = 0.5812 D.W. = 1.6376 F-St = 25.29 (2,33)
(3.9)

V_t* = 0.3164* -0.5905^*+0.4144 r,_2*+0.0094 r
(0.16) (-1.89) (2.75) (1.99)
R^2 = 0.6744 #² = 0.6407 D.W. = 2.2268 F-St = 20.02 (3,29)
(3-10)

C,* = 14.2638*- 1.0745 V_t* +0.0160 T
(10.50) (-441) (2.27)
R^2 =0.4134 ^ = 0.3779 D.W. = 0.7189 F-St = 11.6305 (2,33)
(3.11)

C_t* = 12.6212* -0.8380 V_t* + 1.4271 P_t* +0.01963 T
(9-6o) (-3.66) (3.14) (3.09)
£² = 0.5515 R^2 = 0.5095 D.W. =0.8127 F-St = 13.12(3,32)
(3-i2)

PR_t* = -3.5482*- 3.6223 C_t* + 4.2352 SP_t*
(-141) (-jo.17) (8.90)
/?² = 0.7630 JJ² = 0.7486 D.W. = 1.7152 F-St = 53.11 (2,33)
(3-i3)

SL_t* = 10.3875* +0.2908SPf* +0.2247 V_t* +0.0071 T
(12.59) (3.82) (2.50) (2.47)
R^2= 0.6054 K² = 0.5672 D.W. = 1.6529 F-St =15.85(3,31)
(3.14)

Note: * indicates log values. Figures within brackets are values of t distribution. D.W. = Durbin-Watson statistics. F-St = F distribution.

For the export function (3.1) the statistical analysis reveals some unexpected results (see equation (3.8), TableB.3.1).

The most significant elasticity of response on the values of the Company's exports is that of the cost index, followed by the volume and the bills of exchange. The index of earnings is not significant at any level. It is worth noting that the sign of the cost elasticity is positive, suggesting that when there is a change in the level of costs the Company's exports to Asia respond by moving upwards. But the change is not proportional. If the costs increase by 100 per cent the exports move up by 34 per cent holding other variables constant. The coefficients of the volume of imports and the bills of exchange are also positive, though the latter is only marginally important to the dependent variable. The failure of the earnings index to show any positive influence is decidedly strange when we consider the importance attached by the Court of Directors to the cash inflow and the level of trading profits. There are two possible explanations. The actual relationship between the Company's net earnings and the exports may be a 'step' function and not a smooth curve, as suggested in our model. In other words, the exports may respond to the earnings only once in a while and not in each time period. The existence of large cash reserves and easy borrowing facilities combined with the Court of Directors' future expectations very possibly reduced the impact of the actual net earnings on the level of trading. Finally, while the results indicate a strong overall relationship between the explanatory variables and the dependent variable, they also show that taken as a whole just over 50 per cent of the variance in the latter can be attributed to the systematic elements represented by the former.

It may be thought that a quantitative relationship that is able to account for no more than half the annual variations in an economic time-series is not very satisfactory, although the weak results may tell us something about the Company's decision-making process and the operating conditions. However, the alternative export function (3.2), tested in equation (3.9), Table B.3.1, perhaps takes us a little closer to reality. The results are indeed striking. Of the two independent explanatory variables in it, the influence of the index of cost prices is shown to be insignificant. However, there is a very strong relationship between the total export values and the Company's textile orders, and the margin of errors associated with the predictions made by this variable is extremely small. Nearly 60 per cent of the annual variance in the exports is explained by the alternative equation. There is no doubt that from the statistical point the result of the latter is much more satisfactory than the first one, and we may conclude that as a test of the Company's decision-making process on exports we have probably found the true and simple mechanism at work. The total quantities of orders sent out from London were the most important determinant in fixing the level of the Company's annual working capital. We should note, though, that the effect of a change in the total textile orders on the export values was once again less than proportional; a change of 100 per cent in the former caused a change of only 54 per cent in the latter. This is what we would expect from the fact that the textiles comprised only about three-quarters of the imports. A second reason is that the total number of textiles entered into the yearly lists was a theor-

etical maximum for each different category of cotton cloth, in case there were deficiencies in the delivery of particular varieties. For example, the Correspondence Committee advised the Bombay Council in 1719, 'When our Committee draw out their lists of the several goods as to species and quanturns to be sent to our general settlements they usually draw out the whole more than the stock sending, with this view to shew how far any quantity may be provided in case the other sorts cannot or are too dear.[1] If the stock available fell short of the total investment requirements, the goods were to be purchased in the same proportions as in the list of orders.[2] The failure of the cost price index to exhibit any influence may be because of a technical reason; the strength of the order index is probably swamping the effect of the weaker variable. On the other hand, it may also be a sign that in the long-run the Company's responsiveness to aggregate price changes related to the *composition* rather than to the *level* of trading. A rise in the cost price of certain goods led to their substitution by other lower-cost products or to the switching of orders to other producing areas.[3]

When we turn to the import function (3.3), we can see at once that its theoretical assumptions are generally confirmed by the results (equation (3.10), Table B.3.1). The servants' price elasticity of demand for Asian goods is significantly negative, though it is considerably less than unity. An increase of 100 per cent in the cost price causes the quantities of commodities bought to contract by 60 per cent when there are no changes in the other variables in the equation. The relative disproportionality between demand and prices can be explained by the fact that the Company's factories are annually supplied by a list of orders specifying the different price schedules at which the goods were to be purchased, and that no matter what the level of costs the ships were not to be sent home half-laden. The strongest relationship in the import function is that for the total funds received from Europe for the purchase of the goods, which constitute the Company's budget constraint line in Asia. Once more a positive response of less than one suggests the existence of certain external constraints in our trading model. From the coefficient of the income elasticity it is clear that even, if the total amount of funds at the disposal of the Asian settlements were to double, the volume of the Company's imports would move up by only 40 per cent. The capacity of the ships to carry a finite amount of cargo is an obvious constraint here, and the investment opportunities in the purchasing market were not unlimited. Finally, we cannot rule out a slack administrative attitude on the part of the Company's servants who might have used the trading capital in a less than productive way. We now come to the last variable in (3.3), the shift factor or the time trend. This shows that the quantities of goods which the Company's servants were prepared to buy for a given level of prices and purchasing-funds shift upwards by about 1 per cent a year over a period of 33 years. The three explanatory variables taken together account for 64 per cent of the annual variance in the volume of imports. It can be concluded that the import function (3.3) provides a reasonably good fit to the data.

But neither of the three relationships (3.1-3.3) tested so far succeed entirely in explaining why fluctuations occur in the Company's major economic time-series from year to year. The theoretical limitations of the

estimating equations and the assumption of a constant elasticity will be discussed shortly. Now, we go on to examine the results of the other parts of the trading system. The most obvious extension to the core model is to study the character of changes in the level of costs, rates of profits, and total sales. The standard theory of costs favours a form of behaviour in which costs first decline with an increase in output and then rise steeply. A cost function in this particular form cannot be tested with the available statistical methods. Instead the two alternative forms in (3.4—3.5) attempt to measure the shift in the level of unit costs for an associated volume of trade over time. The results of (3.4), given in equation (3.11), Table B.3.1, suggest that as the volume of total imports rises the unit cost declines by the same proportion. In other words, the elasticity of response is equal to one. They also show that over time the costs tend to shift upwards by an annual rate of nearly 2 per cent for a given volume of imports. The alternative hypothesis (3.5) (tested in equation (3.12), Table B.3.1), points very nearly to the same conclusions. It differs from (3.4) in having an extra variable, the aggregate price index of the imports, and its estimated coefficient proves that if the index increases by 100 per cent the unit costs would move up by 140 per cent. But the additional statistical tests, which measure the success of the hypothesised relationships, reveal certain weakness in the two models. In the first place, no more than 40-50 per cent of the variance in the cost term is accounted for by the independent variables. Secondly, there is evidence of misspecification in the estimating equation. It is possible that the assumption of constant elasticities embedded in the structure of the equations may not be justified, and that a more complicated relationship is involved.

However, from our knowledge of the actual economic conditions in which the East India Company conducted its trade, it would appear that the coefficients of the cost equations carry certain inherent plausibility. The inverse proportional relationship between the volume index and the unit cost, for example, can be interpreted as a sign of excess capacity in the Company's trading system. All the ships sent to the Indies annually were not always fully employed, though the cost of demurrage continued to mount for the excess period they stayed in the Asian waters. A speedier turnround of ships and an increase in the value of their cargo reduced transport charges. Similarly, the overhead costs both at home and in the Asian factories fell in unit terms with an increase in the volume of trade. We also know from the repeated comments made by the Correspondence Committee that the Company regarded the level of prime costs of the imports as a crucial factor in the total costs. For example, in 1717 the Committee is writing to Madras, 'You will also observe our said order for Investments are larger than of late which we are encouraged to give on the observations of our goods finding a vend in several places which took off but very few or none formerly. We intend you sufficient stock to provide the whole [Investments] which we compute at much the same prices with the goods received last year . . . It must be your constant endeavour to take care the several Species of Goods are true made, kept up to their lengths, breadths and goodness and well bought for. We pay the same freight and customs except the Fifteen per cent on the Gross Amount at the sale for the worst of the Sorts as the best.'[4]

Three years later the Company instructed the Calcutta Council to keep Fort St George regularly supplied with saltpetre for ballasting the ships and to prevent any avoidable delay in their turnround. On fixed and variable costs the Correspondence Committee pointed out, 'it is the same loss to us if we pay demorage for our ships' detention for want of it *[saltpetre]* whether on the Coast or in the Bay and it behoves us greatly to save or prevent the least charge. For what by heavy duties here, highness of freights, and our annual expences at our several settlements abroad, and other unavoidable disbursements we find it very difficult to get a small profit to our adventurers.'[5] Although the results of the regression on the cost functions cannot be entirely trusted because of the evidence of omitted variables, these comments and other qualitative information from the Company's records seem to confirm that the unit cost was likely to fall with a rise in the volume of trade, while the cost price of imports exerted a very strong influence.

The reference by the Committee of Correspondence to the relationship between the level of costs and profits is of some importance. For when the actual rates of profits during the years 1710 to 1744 are related to the unit costs and an index of aggregate sales price, as in hypothesis (3.6) in the trading model (tested in equation (3.13), Table B.3.1), it is seen that the estimated elasticities are highly significant. If the cost index changes by 100 per cent the rate of profit declines or improves by 300 per cent, the negative sign of the coefficient indicating an inverse response. But an increase in the sales price causes a proportional improvement in the Company's profitability by an order of 400 per cent, and a comparison between the two coefficients suggests that during the period under study it was the changes in the sales price rather than in unit costs which had the stronger effect on the variations in the rates of profits. From the sampling point, hypothesis (3.6) is the best one tested so far, and 75 per cent of the variance in the profits is explained by the indices of unit costs and sales prices. In contrast the goodness of fit to the data in the sales function (3.7) is not quite so high and the suggested relationship only accounts for about 60 per cent of the variance in the total sales receipts (see equation (3.14), Table B.3.1). The respective elasticities of sales price and the volume of imports on the latter for a change of 100 per cent are of the order of 30 and 23 per cent, and the time trend shows an upward shift of just under 1 per cent annually. There is of course a major source of error in the explanatory variables of the last equation. As we do not know the exact amount of imported goods that were offered for sale in a particular year, the volume of current imports can serve as only an approximate substitute. The calculation of the index of sales price is open to the same objection. Considered together, the results of the profit and sales functions (3.6) and (3.7) may be interpreted as indicating a strong to medium association between the dependent and independent variables. They certainly uphold in quantitative terms the Court of Directors' repeated statements that the volume of imports was the main source of the Company's revenue and that variations in unit costs and unit sales value governed the profits of the East India trade.

APPENDIX 3: ECONOMETRIC ESTIMATION

Summary of findings

The statistical analysis of the aggregate time-series yields useful insight on the working of the Company from two different aspects discussed earlier in the systems analysis: the decision-rules of the management and the actual operational part with its physical inputs and outputs. What we have studied in the quantitative analysis is the relationship and the behaviour of the latter. Our trading model identifies five dependent variables, the export values, the volume of imports, unit costs, the rate of profit, and the total sales receipts. The first two variables and the last one can be taken as outputs generated by both the management and the operational systems. But the unit costs and the rate of profits, in so far as the Company was aware of such decision-rules, would have been outputs .emerging from the internal information function. Apart from time, the model also postulates that the following explanatory variables are capable of predicting the changes in the above five. These are unit costs, net earnings, amount of bills of exchange drawn from the Indies, volume of imports, the annual list of orders, the cost price of imports, the total purchasing-funds, and the sales price in London. From the calculated parameters (the fixed weights associated with each of these variables), we know that the annual variations in the values of the exports were mainly related to changes in the order list. The volume of imports on the other hand was a function of their cost price and the amount of purchasing-funds. The unit costs decreased with an expansion in trade, though over time the level of costs tended to rise. The rate of profits was critically dependent on the variations in unit costs and sales price, while the total sales receipts were partially determined by variations in the sales price and the import volume.

The tests of significance which measure the coefficients of the independent variables, the values of *t* distribution and the *F* statistics, are on the whole satisfactory. But the R^2 testing the goodness of fit between the actual data and the calculated values of the equations is not very high for any of them. It is possible that the equation forms, particularly the assumption of a constant elasticity, have not been properly specified for the true relationships. The additive elasticity formula, used in our equations with double logarithmic transformation, is based on the assumption that the parameters remain constant over the whole range of the demand or supply curves. It may well be the case that higher elasticity is associated with higher prices and a low response with lower prices. Indeed the whole set of relationships identified in the trading model may take on a more complicated structure. The key to the problem lies in studying the decision theory as outlined in Chapter 2 and relating it to the physical behaviour of the Company's commercial variables.

Equations and variables for estimating the elasticities of the Company's imports

Equation type

1 $\log Q_t = a + b \log P_t + c \log X_{t-2}^*$

2 $\log Q_t = a + b \log P_t + c \log X_{t-2}^* + T$

3 $\log Q_t = a + b \log P_t + c \log X_{t-2}^* + d \log SP_{t-2} + T$

Variable symbol explanation

Q_t = Quantity of the imports measured in the original units, the subscript $t \pm n$ denotes time-period measured in years
P_t = Price of the imports measured in sterling
X_t = The amount of finance available for the purchase of imports in particular areas of trade
X_t^* = The amount of finance deflated by an index of silver price in London
SP_t = A weighted index of the selling price of the imports in London
T = The time trend or a shift variable

Table B.8 . *Estimated elas[illegible]ties of the Company's [illegible]rts*

Equation type	Commodity	Period	Dependent variable	$\log P_t$	$\log X_{t-1}$*	$\log SP_{t-2}$	Time trend	R^2	$\bar{R}^2$	D.W.	F-St.
1	Bombay textiles	1710–45	$\log Q_t$	[illegible]	[illegible]	—	—	0.48	0.43	1.85	9.30 (2, 30)
2	Bombay textiles			[illegible]	[illegible]	—	[illegible]	0.50	0.41	1.85	[illegible]
3	Bombay textiles			[illegible]	[illegible]	[illegible]	[illegible]	0.50	0.38	1.92	4.43 (4, 18)
1	Bombay textiles	[illegible]	$\log Q_t$	[illegible]	[illegible]	—	—	[illegible]	—	2.13	2.85 (2, 13)
2	[illegible]			[illegible]	[illegible]	—	[illegible]	[illegible]	—	2.28	2.16 (3, 12)
3	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	[illegible]	1.49 (4, 11)
1	Madras textiles	1710–45	$\log Q_t$	[illegible]	[illegible]	—	—	0.11	0.05	1.55	1.87 (2, 30)
2	Madras textiles			[illegible]	[illegible]	—	[illegible]	0.30	0.23	[illegible]	4.13 (3, 29)
3	Madras textiles			[illegible]	[illegible]	−0.71 [−1.49]	[illegible]	[illegible]	[illegible]	1.99	3.78 (4, 28)
1	Madras and Bengal textiles	1664–83	$\log Q_t$	[illegible]	[illegible]	—	—	[illegible]	—	2.03	42.97 (2, 13)
2	Madras and Bengal textiles			[illegible]	[illegible]	—	[illegible]	[illegible]	—	2.04	26.48 (3, 13)
3	Madras and Bengal textiles			[illegible]	[illegible]	[illegible]	[illegible]	0.88	—	1.92	20.08 (4, 11)

APPENDIX 3: COMPANY'S SELECTED IMPORTS

1	[illegible]gal [illegible]tiles	1710–45	log Q_t	[illegible] 73 [[illegible] 75]	[illegible].7[illegible] [[illegible]]	—	—	0.60	[illegible]7	1.78	[illegible] ([illegible])
2	[illegible]gal [illegible]tiles			[illegible] 6 [[illegible] 15]	0.44 [[illegible]]	—	[illegible]	[illegible]71	0.68	1.[illegible]9	[illegible] ([illegible])
3	[illegible]gal [illegible]tiles			[illegible] 01 [[illegible] 03]	0.45 [[illegible].97]	−[illegible]14 [−[illegible]]	[illegible]	[illegible]71	0.66	[illegible]	17.1[illegible] (4, [illegible])
1	Total textiles	1710–45	log Q_t	[illegible]	0.78 [[illegible]]	—	—	[illegible]	[illegible]	2.00	1[illegible] ([illegible])
2	Total textiles			[illegible]	[illegible] [[illegible]]	—	0.005 [1.14]	[illegible]4	[illegible]	[illegible]8	1[illegible].4[illegible] ([illegible])
3	Total textiles			[illegible] 3 [[illegible]6]	[illegible] [[illegible]]	0.18 [[illegible].86]	0.003 [0.[illegible]1]	[illegible]	[illegible]	2.10	[illegible]7 (4, 28)
1	Total textiles	[illegible]	log Q_t	[illegible]	[illegible] [[illegible]10]	—	—	[illegible]	1	[illegible]5	29[illegible] ([illegible], 1[illegible])
2	Total textiles			[illegible]	[illegible] [4[illegible]8]	—	0.01 [0.[illegible]]	[illegible]2	1	[illegible]	18.[illegible] ([illegible], 12)
3	Total textiles			[illegible]	[illegible]7 [[illegible]1]	−[illegible]49 [−[illegible].06]	0.02 [0.78]	[illegible]	1	1.40	[illegible] (4, 11)
1	Pepper	1710–45	log Q_t	[illegible] [1.14]	0.45 [1.21]	—	—	[illegible]	0.10	1.77	[illegible].63 ([illegible], [illegible]0)
2	Pepper			[illegible] [[illegible]]	[illegible] [[illegible]]	—	0.0[illegible] [1.7[illegible]]	[illegible]	[illegible]	2.01	[illegible].94 ([illegible], [illegible])
3	Pepper			[illegible] [[illegible]]	[illegible]4 [[illegible]1]	0.16 [3.37]	0.05 [3.37]	[illegible]45	[illegible]7	1.64	[illegible].71 (4, [illegible])

[illegible] (*contd.*)

Equation type	Commodity	Period	Dependent variable	log P_t	log X_{t-1}*	log SP_{t-2}	Time trend	R^2	$\bar{R}^2$	D.W.	F-St.
1	Pepper	[illegible]	log [illegible]	[illegible]	[illegible]	—	—	0.82	—	[illegible]	25.24 (2, 11)
2	Pepper			[illegible]	[illegible]	[illegible]	[illegible]	0.83	—	1.67	[illegible] (3, 10)
3	[illegible]			[illegible]	[illegible] [0.23]	[illegible]	[illegible]	0.83	—	1.66	11.03 (4, 9)
1	Saltpetre	1710–45	log Q_t	[illegible]	0.33 [illegible]	—	—	0.11	0.05	1.40	1.88 (2, 30)
2	Saltpetre			[illegible]	[illegible]	—	0.04 [3.33]	0.34	0.26	1.70	4.88 (3, 29)
3	Saltpetre			[illegible]	[illegible]	[illegible]	0.04 [2.97]	0.34	0.24	1.70	3.53 (4, 28)
1	Raw silk	1710–45	log Q_t	0.11 [0.16]	[illegible]	—	—	0.56	[illegible]	1.30	19.44 (2, 30)
[illegible]	[illegible] silk			0.08 [0.11]	[illegible]	—	0.003 [0.23]	[illegible]	0.52	1.28	[illegible] (3, 29)
[illegible]	Raw silk			0.26 [0.35]	[illegible] [3.96]	0.0 [1.47]	0.01 [0.47]	[illegible]	0.53	1.41	10.03 (4, 28)

I	Coffee	1710-45	*log (It*	0.58 [1.71]	0.29 [*-33]	—	—	0.25	0.19	2.25	3.91 (2, 23)
2	Coffee			0.96 [2.87]	0.09 [o-43]	—	0.03 [2.62]	O.43	o-35	2.78	5-56 (3, 22)
3	Coffee			0.98 [2.9¹]	0.09 [0.41]	—0.03 [-0.90]	0.03 [2.13]	0.45	o.35	2.80	4.34(4,21)
i	Tea	1717-60	log a*	—0.61 [-1.47]	1.05 [7-34]	—	—	0.69	0.67	2.38	42.62 (2, 39)
2	Tea			o-33 [0.67]	0.82 [545]	—	0.03 [3.08]	o-75	O-73	2.73	37-75 (3» 38)
3	Tea			—0.13 [-0.26]	0.83 [5.80]	0.24 [2-17]	0.03 [3.06]	0.78	o-75	2.84	32.24 (4, 37)

Note: R^2 — coefficient of correlation, $\bar{R}^2$ = coefficient of correlation adjusted for degrees of freedom, D.W. = Durbin-Watson Statistic, Figures within the square brackets are the values for Student-/ distribution, and those within round brackets after F-St. are the degree of freedom for the denominators and numerators, respectively. The coefficient of the constant term in the equations is not given here.

Appendix 4

THE GROUPED LIST AND THE GLOSSARY OF INDIAN TEXTILE TYPES

From the early seventeenth century the records of the European East India Companies contain the names of a very wide variety of Indian cotton piece goods. Most of these can be identified both by the area where they were woven and finished and by their generic type. In addition the records often also mention the use to which the textiles were applied. It is much more of a problem to find the exact Indian terms for the corrupt spelling in which the piece-goods[5] names appear in the Western sources. Henry Yule and A. G. Burnell attempted to provide some etymological guide in their *Hobson-Jobson,* and recently John Irwin in his *Studies in Indo-European textile history* has prepared an extensive glossary of textile terms in which the Indian equivalents are given wherever possible. He has, however, warned us against the danger of inspired guesswork when we are dealing with names which have now disappeared from current usage in most cases. The problem is well illustrated by the recent discovery, at the India Office Library, of an extensive collection of Bengali correspondence and account books which belonged originally to the papers of John Taylor, the East India Company's Commercial Resident in Dacca at the end of the eighteenth century. Taylor's several reports and accounts of the Dacca textile industry are preserved in the Home Miscellaneous Series, vol. 456F. The Bengali Letter Books containing the correspondence between Taylor's district office and his Indian agents responsible for procuring the cotton piece goods give the correct Bengali names for all textile types purchased in the Dacca area. Many of these are identical to those in our list. In some cases the Bengali names are exactly reproduced in their English spellings; in others they are wildly off the mark. Two specific examples can be cited. The type known as tanjeeb in the Company's records is written in Bengali as *tanjeb,* which itself was probably derived from the Persian word *tanzeb.* But the type spelled in English as *seerhaudconnae* is written as *sarat-khani,* an adjective formed by the suffix *khani* to the word *sarat,* meaning autumn.

The following list, grouped according to the three major exporting regions, is based on the full statistical tables of the Company's textile imports during the period from 1660 to 1760. These tables are not reproduced in the present work, but the information contained in them includes the total quantity imported, value at cost price, unit cost price, percentage shares in the total quantity and value, quantity sold in London (upto 1704), value sold, unit sale price, and the ratio of mark-up. The total quantity ordered by the Company and the ratio of orders and actual imports are also given. In the glossary the name of the textile is followed by a brief description of the

generic type, the area of production and the names of towns specially associated with it, the quality of the cloth (which can be easily fixed by the cost price), the main usage, the dimensions where available, and finally the main period of trading. It is important to bear in mind that many of the types imported from Gujarat in the seventeenth century were discontinued after about 1710, whereas the piece goods of Bengal expanded in a really big way during the first half of the eighteenth century. The following list is by no means exhaustive, as many other names besides the ones mentioned here are to be found in the records. But these varieties are the ones most frequently imported in our period.

Cotton textiles from western India

bafta, white and red dyed, less frequently black or blue. Gujarat, Broach, Nausari, Bardoli, Konkan, Rajapur. Coarse to fine quality. 9-14 yards long, 0.75-1 yard wide. Domestic and general use. Seventeenth century,

boralchowder, striped. Gujarat. Coarse to medium quality. West African trade. Eighteenth century,

brawle, blue and white striped. Gujarat. Coarse quality. West African trade. Seventeenth century,

cheiloes, striped. Gujarat. Medium quality. West African trade. Eighteenth century,

chintz, block printed. Gujarat and the Deccan, Ahmedabad, Broach, Sironj. Coarse to fine quality. Domestic, West African and Colonial trade. Seventeenth to eighteenth centuries,

derebands (Deriabad), white. North India, often bleached in Broach, later imitated in Surat. Coarse to medium quality. Domestic and general use. Seventeenth century,

dungarees, plain white and dyed. Western coast of India, south of Gujarat. Coarse quality. 8 yards long, 1 yard wide. Domestic use. Seventeenth century.

Guinea stuff, plain dyed, checks, and striped. Gujarat and western coast of India, later imitated in Surat. Coarse quality. West African and Colonial trade. Seventeenth to eighteenth centuries,

mercoolees, plain white. North India. Medium quality. General use and domestic block printing in England. Seventeenth century,

nicannees, striped. Gujarat, Broach, and Baroda. Coarse to medium quality. West African trade. Seventeenth to eighteenth centuries,

byrampauts, plain white and dyed. Gujarat and the Deccan. Coarse and medium quality. General and West African trade. Seventeenth to eighteenth centuries.

lemanees, striped. Gujarat. Fine quality. Domestic use. Eighteenth century,

pautkeys, plain white and dyed. Western coast of India. Coarse quality. 6 yards long, 33 inches wide. West African trade. Seventeenth century,

quilts, embroidered and block printed. Gujarat, Ahmedabad. Medium to fine quality. Domestic use and re-export trade. Seventeenth century,

sallowes, plain white. The Deccan. Medium quality. Domestic use and re-export trade. Seventeenth century.

sovaguzzies, plain white. Gujarat, Broach. Medium quality. Domestic use and block printing in England. Seventeenth to eighteenth centuries.

Bombay stuffs, plain white. Bombay. Medium quality. Domestic use and block printing in England. Eighteenth century,

tapseil, striped. Gujarat. Medium quality. West African trade. Seventeenth to eighteenth centuries,

long cloth, plain white and dyed. Malabar coast. Medium quality. Block printing in England and re-export trade. Eighteenth century,

sallampores, plain white and dyed. Malabar coast. Medium quality. Block printing in England and re-export trade. Eighteenth century,

pallampores, hand painted or block printed. Gujarat, Ahmedabad. High quality. Domestic use as bedspread. Seventeenth century,

bejutapaut, striped and checks. Gujarat. Medium quality. West African trade. Eighteenth century,

negapaut, striped. Gujarat. Medium quality. West African trade. Eighteenth century.

Cotton textiles from southern India

allejaes, striped and checks, red and white or blue and white. South India, Masulipatam. Medium quality. 16-17 yards long, 1.25 yard wide. Domestic and general use, re-export trade. Seventeenth century.

bettelles, plain white and dyed, base cloth for fine embroidery. South India, the Krishna-Godavari delta, Warrangal. Medium to superior quality. 14-25 yards long, 1.25 yard wide. Fashionwear. Seventeenth to eighteenth centuries.

callowaypoos, patterned. South India, Masulipatam, Nellore district. Medium quality. 14 yards long, 1.25 yard wide. Domestic and general use, re-export trade. Seventeenth century.

chintz, hand painted and block printed. Masulipatam and Madras. Fine to superfine quality. Domestic and fashionwear, re-export trade. Seventeenth to eighteenth centuries.

diapers, plain white. South India, Masulipatam. Medium quality. 9-10 yards long, 2.5 yard wide. Domestic and general use, re-export trade. Seventeenth century.

dungarees, plain white. South India, Masulipatam. Coarse. Domestic and general use. Seventeenth century.

gingham, plain white and dyed. South India, Masulipatam, probably imitated from Bengal types. Medium quality. 20-22 yards long, 1.5 yard wide. Domestic and general use, re-export trade. Seventeenth to eighteenth centuries.

izarees, plain white. South India. Medium quality. 8 yards long, 1 yard wide. Domestic and general use. Seventeenth century.

long cloth, plain white. South India, Masulipatam. Medium to fine quality. 37-40 yards long, 1.25 yard wide. Block printing in England, fashion-wear, re-export trade. Seventeenth to eighteenth centuries.

moorees, plain white, base cloth for chintz-making. South India, Masuli-patam. Medium to fine quality. 9-10 yards long, 1.25 yard wide. Fashionwear and re-export trade. Seventeenth to eighteenth centuries.

percalles, plain white, base cloth for chintz-making. South India, Masulipatam. Coarse to fine quality. 8 yards long, 1 yard wide. Domestic and general use, re-export trade. Seventeenth century.

romalls, handkerchief. South India. Medium quality. 0.75 yard square. Clothing and re-export trade. Seventeenth to eighteenth centuries.

sacerguntees, dyed in the thread. South India. Medium quality. Clothing. Seventeenth century.

saderancheras, patterned. South India. Coarse quality. General use. Seventeenth century.

sallampores, plain white and blue dyed. South India, Masulipatam. Medium quality. 15-18 yards long, 1 yard wide. Clothing, re-export, and Colonial trade. Seventeenth to eighteenth centuries.

sail cloth, plain white. South India. Coarse quality. General use. Seventeenth century.

Cotton textiles from Bengal, Bihar, and Orissa

addaties, plain white muslin. Bengal, Dacca district. Medium to fine quality. Fashionwear and re-export trade. Seventeenth to eighteenth centuries,

allibannies, mixed cotton and silk, probably striped. Bengal, Malda-Kasimbazar area. Medium to superior quality. Fashionwear and re-export trade. Seventeenth to eighteenth centuries,

atchabannies, plain white. Bengal. Coarse quality. Domestic and general use. Eighteenth century,

bandannoes, silk handkerchief, dyed in the thread. Bengal, Kasimbazar. Superior to fine quality. Fashionwear and re-export trade. Seventeenth to eighteenth centuries,

bafta, plain white. Bengal and Bihar, Dacca, Jugdea, Patna. Medium to superior quality. 13-18 yards long, 1 yard wide. Clothing and block printing in England. Eighteenth century,

carridarries, mixed cotton and silk, striped. Bengal. Medium to superior quality. Clothing and re-export trade. Eighteenth century,

cherconnaes, mixed cotton and silk, striped and checks. Bengal. Fine quality. Fashionwear and re-export trade. Seventeenth to eighteenth centuries,

chillaes, striped cotton in blue and white. Bengal. Medium quality. Clothing and re-export trade. Eighteenth century,

chintz, block printed. Bengal and Bihar, Kasimbazar, Patna, Calcutta. Medium to superior quality. Domestic and general use, re-export and Colonial trade. Seventeenth to eighteenth centuries,

chowtars, plain white. Bengal and Bihar. Medium to superior quality. 13 yards long, 1 yard wide. Clothing and re-export trade. Seventeenth to eighteenth centuries,

coopees, plain white. Bengal. Medium to superior quality. Clothing and re-export trade. Eighteenth century,

cushtaes, striped blue and white. Bengal, Nadia district. Medium to superior quality. Clothing and re-export trade. Eighteenth century,

chucklaes, mixed cotton and silk, striped. Bengal. Fine quality. Fashionwear and re-export trade. Seventeenth to eighteenth centuries.

cuttanees, plain white and striped. Bengal. Superior to fine quality. Fashionwear and re-export trade. Seventeenth to eighteenth centuries,

cossaes, plain white muslin. Bengal, Santipur, Dacca district. Fine quality. 20 yards long, 1-1.5 yard wide. Fashionwear and re-export trade. Seventeenth to eighteenth centuries.

dysooksies, plain white muslin. Bengal. Fine quality. Fashionwear and re-export trade. Eighteenth century,

doreas, mixed cotton and silk. Bengal, Malda-Kasimbazar area. Fine to superfine quality. Fashionwear and re-export trade. Seventeenth to eighteenth centuries,

dimitties, plain white muslin. Bengal and Orissa, Dacca, Balasore. Fine quality. Fashionwear and re-export trade. Seventeenth and eighteenth centuries,

dosooties, plain white muslin. Bengal. Medium, fine, and superfine quality. Fashionwear and re-export trade. Eighteenth century,

elatches, mixed cotton and silk, striped. Bengal, Malda, Bihar, Patna. Fine quality. Fashionwear and re-export trade. Eighteenth century,

emerties, plain white. Bihar, Patna. Medium quality. 13-18 yards long, 0.75 yard wide. General use, block printing in England, and re-export trade. Seventeenth to eighteenth centuries,

ginghams, mixed cotton and silk, striped. Bengal, Kasimbazar. Medium quality. Fashionwear and re-export trade. Seventeenth to eighteenth centuries,

gurrahs, plain white. Bengal, Kasimbazar-Malda area. Coarse to medium quality. 15-33 yards long, 1 yard wide. Domestic and general use, block printing in England, re-export trade. Seventeenth to eighteenth centuries,

handerkerchief, cotton and silk mixed. Bengal. Medium to fine quality. Clothing. Seventeenth to eighteenth centuries,

hummums, plain white muslin. Bengal. Superior to fine quality. Clothing and re-export trade. Seventeenth to eighteenth centuries,

jamdannees, brocaded with white or coloured silk. Bengal, Dacca district. Luxury quality. Fashionwear. Seventeenth to eighteenth centuries,

jamwars, silk brocade. Bengal, Kasimbazar. Luxury quality. 10-18 yards long, 0.75 yard wide. Fashionwear. Seventeenth to eighteenth centuries,

lacowries, plain white. Bihar, Patna, Lakhowar. Coarse to medium quality. Domestic and general use, re-export trade. Seventeenth to eighteenth centuries,

mulmuls, plain white muslin, base cloth for fine embroidery or flowering on the loom. Bengal, Santipur, Dacca district. Fine to superfine quality. 20 yards long, 1 yard wide. Fashionwear and re-export trade. Seventeenth to eighteenth centuries,

nainsooks, plain white muslin. Bengal, Dacca district. Superfine to luxury quality. Fashionwear. Eighteenth century,

nillaes, mixed cotton and silk, striped. Bengal. Medium to superior quality. Clothing and re-export trade. Seventeenth to eighteenth centuries,

photaes, dyed calico. Bengal. Coarse to medium quality. Domestic and general use, re-export trade. Seventeenth to eighteen centuries.

peniascoes, mixed cotton and silk, striped. Bengal. Medium quality. Clothing and re-export trade. Seventeenth to eighteenth centuries,

romalls, handerkerchief. Bengal. Medium quality. Clothing. Seventeenth to eighteenth centuries,

silk lungees, silk handerkerchief used in India as a sarong. Bengal, Kasimbazar. Clothing. Seventeenth to eighteenth centuries,

sannoes, plain white. Orissa, Balasore. Medium quality. Domestic and general use, re-export trade. Seventeenth to eighteenth centuries,

shalbafts, plain white muslin. Bengal. Fine quality. Fashionwear and re-export trade. Seventeenth to eighteenth centuries,

seerhaudconnaes, plain white muslin. Bengal, Dacca district. Luxury quality. Fashionwear. Eighteenth century,

seerbettees, plain white muslin. Bengal, Dacca district. Fine to superfine quality. Fashionwear and re-export trade. Eighteenth century,

seerbands, plain white muslin. Bengal, Dacca district. Medium to fine quality. Clothing and re-export trade. Seventeenth to eighteenth centuries,

seersuckers, mixed cotton and silk, striped. Bengal, Kasimbazar. Medium to superior quality Clothing and re-export trade. Eighteenth century,

sooseys, mixed cotton and silk, striped. Bengal, Kasimbazar. Fine quality. Fashionwear and re-export trade. Seventeenth to eighteenth centuries,

taffetas, silk piece goods. Bengal, Kasimbazar. Fine quality. Fashionwear and re-export trade. Seventeenth to eighteenth centuries,

tanjeebs, plain white muslin. Bengal, Dacca district. Fine quality. Fashionwear and re-export trade. Seventeenth to eighteenth centuries,

terrindams, plain white muslin. Bengal, Dacca district. Fine to superfine quality. Fashionwear and re-export trade. Seventeenth to eighteenth centuries,

tepoy, mixed cotton and silk. Bengal. Fine quality. Clothing and re-export trade. Eighteenth century.

Appendix 5

NOTES ON TABLES C.1-24

Sources

India Office Records, the East India Company, the Accountant General's Department, Series L/AG/i/i/vols. 1-20 (General Ledger Books), Series L/AG/i/6/vols. 1-14 (Commerce Journals); Bengal General Journals and Ledgers, Range 174-5; Bombay Journals and Ledgers, Range 419-20; Madras Journals and Ledgers, Range 335-6. See also Appendix 1 for the methodology of data-processing.

Tabled. Total exports

The shipping year runs from July to June. 1660 = July 1659 to June 1660. But it is to be remembered that the sailings were mostly between October and April. The total values are derived by summing the export commodities and treasure listed in Appendix 1, p. 475.

Table C.2. Total imports

The shipping year runs from April to March for the period from 1664 to 1705 and from July to June for 1706-1760. 1664 = April 1664 to March 1665. 1706 = July 1706 to June 1707. The total values are derived by summing the import commodities listed in Appendix 1, p. 475. The value of the imports from the different ports of shipment are adjusted for the transhipment of goods. For example, the cargo of a Madras ship carrying both Bengal and Coromandel goods is separated and the items are reallocated to the area that supplied them in the first place. See also Appendix 1, pp. 468 and 470.

Tables C. 8-24. Commodity imports

The cost price and sale price are derived respectively by deflating the cost value and sale value by the quantities. The proportion of the value of each commodity in total import value is shown in the percentage figure. The mark-up is obtained by deflating the sale price by the cost price. The prices of low-valued goods are rounded to two decimal places, but the mark-up ratios are accurate arithmetically. The sales figures sometimes include private goods. Due to their complexity, the sales data in the Ledger Books for 1664-1708 cannot be reprocessed very precisely.

Table C.i. *Total exports to Asia*

Year	Value £	Year	Value £
1660	68388	1711	542 4^{1}9
1661	131271	1712	466274
1662	177932	1713	300418
1663	175116	1714	3343i8
1664	118362	1715	458618
1665	55279	1716	398662
1666	37626	1717	629340
1667	12 344	1718	603 760
1668	171588	1719	707895
1669	181940	1720	697009
1670	273177	1721	681427
1671	320507	1722	769958
1672	285668	1723	751602
1673	171119	1724	600375
1674	208651	1725	647973
1675	413583	1726	599427
1676	43i 94i	1727	572010
1677	323748	1728	481600
1678	421186	1729	639215
1679	39 * 3°2	1730	756489
1680	461 206	i73i	698607
1681	617774	1732	766141
1682	746535	1733	538744
1683	600633	1734	531072
1684	488709	1735	630272
1685	597107	1736	656581
1686	412319	1737	758116
1687	34i 572	1738	717830
1688	202518	1739	612490
1689	8253	1740	575332
1690	10239	1741	776973
1692	174937	1742	601191
1693	193463	1743	866544
1694	328728	1744	79i 799
1695	327543	1745	661316
1696	393^{6}2i	1746	645160
1697	57759	1747	609490
1698	370685	1748	1105845
1699	567587	1749	841965
1700	579198	I75O	1292589
1701	755556	i75i	1034689
1702	325264	1752	1404878
1703	233389	1753	1265020
1704	398086	1754	1386569
1705	193280	1755	946809
1706	312591	1756	878464
1707	306944	1757	1137023
1708	490446	1758	782309
1709	552 154	1759	534977
1710	508907	1760	5i5i44

Table G.2. *Total imports from Asia*

Total imports from Asia		Imports from Bombay		Imports from Madras		Imports from Bengal		Imports from S.E. Asia		Imports from China	
Year	Value £	Value £	%	Value £	%	Value £	%	Value £	%	Value £	%
1664	138278	49181	35-6	48496	35-i	24882	18.0	13335	9-6	1246	0.9
1665	158755	63130	39.8	53ioo	33-4	23867	15.0	I79O3	"•3		
1666	5877	909	15-5			4875	83.0	93	1.6		
1667	48539	43286	89.2	3766	7.8	114	0.2	369	0.8		
1668	4575	4556	99-6					19	0.4		
1669	138808	51239	36.9	30056	21.7	19069	13-7	36711	26.4	130	O.I
1670	216927	74181	34-2	70182	32.4	25358	11.7	47206	21.8		
1671	201825	96816	48.0	41152	20.4	35563	17.6	28274	14.0	20	0.0
1672	326924	70698	21.6	108810	33-3	552OO	16.9	83858	25-7	4*79	1-3
1673	257836	94750	36.7	85204	33-o	74J29	28.8	166	O.I	50	0.0
1674	178411	92090	51.6	7O432	39-5	9040	5-i	2855	1.6		
i675	169172	35471	**21.0**	58568	34.6	29732	17.6	43845	25-9	807	0.5
1676	334424	145324	43-5	87510	26.2	59622	17.8	40146	**12.0**	439	O.I
1677	320823	96402	30.0	80376	25.1	514^	16.0	80812	25.2	8164	2.5
1678	325593	102725	31.6	109685	33-7	56411	17-3	45229	13-9	9889	3.0
1679	3559O6	89366	25-1	145481	40.9	80709	22.7	28695	8.1	8379	2.4
1680	356465	97416	27-3	131532	36.9	77951	21.9	30932	8.7	13899	3-9
1681	393921	108342	27-5	125816	3i-9	98373	25.0	52766	13.4	475i	1.2
1682	421917	142457	33.8	151860	36.0	IO3749	24.6	12576	3.0	6542	1.6
1683	523039	189434	36.2	209658	40.1	109979	**21.0**	2536	0.5	3922	0.7
1684	802527	311261	38.8	318527	39-7	I57O93	19.6	3265	0.4	4013	0.5
1685	584019	183469	3i-4	171 240	29-3	**211900**	36.3	1650	0.3	4869	0.8
1686	322632	42764	13-3	128687	39-9	136008	42.2	482	O.I	10674	3-3
1687	340380	86212	25-3	174629	5i-3	73474	21.6	3i39	0.9		
1688	158713	78559	49-5	57006	35-9	5562	3-5	358	0.2	6642	4.2
1689	133560	13693	10.3	88055	65-9	4996	3-7	335i	2.5	23465	17.6
1690	120971	65034	53.8	J9376	16.0	397O	3-3	9124	7-5	13646	11.3
1691	83512	19280	23.1	4556	5-5	37800	45-3	2871	3-4	19007	22.8
1692	26386	18868	7i-5	1888	7.2	2 773	10.5	279	1.1	1255	4.8
1693	60074	29128	48.5	599i	**10.0**	18620	31.0	60	O.I	6275	10.4

1694	79322	[illegible]	[illegible]	[illegible]	23.1	[illegible]005	74.3	[illegible]	[illegible]	1[illegible]	1.9
1695	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]12	97.5	[illegible]	[illegible]	351	1.2
1696	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]09	65.7	[illegible]	[illegible]		
1697	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]21	53[illegible]	[illegible]	[illegible]	24092	16.4
1698	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]82	29[illegible]	[illegible]	[illegible]	398	0.2
1699	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]52	42[illegible]	[illegible]	[illegible]	17823	4.6
1700	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	37[illegible]21	47[illegible]	[illegible]	[illegible]	5511	1.1
1701	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	49[illegible]22	41[illegible]	[illegible]	[illegible]	57191	9.6
1702	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	46[illegible]58	66[illegible]	[illegible]	[illegible]	76063	20.5
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	65[illegible]06	26[illegible]	[illegible]	[illegible]	28492	11.4
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	12[illegible]24	7[illegible]	[illegible]	[illegible]	61090	39.0
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	65[illegible]93	32[illegible]	[illegible]	[illegible]	51150	25.1
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	74[illegible]27	35[illegible]	[illegible]	[illegible]	16029	7.7
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	97[illegible]81	55[illegible]	[illegible]	[illegible]		
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	60[illegible]70	36[illegible]	[illegible]	[illegible]	22915	1[illegible]
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	27.7	105[illegible]72	52[illegible]	[illegible]	[illegible]	2267	[illegible]
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	173[illegible]19	46[illegible]	[illegible]	[illegible]		
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	271[illegible]17	60[illegible]	[illegible]	[illegible]	4863	1.1
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	225[illegible]54	46[illegible]	[illegible]	[illegible]	21478	4.4
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	234[illegible]31	43[illegible]	[illegible]	[illegible]	42807	8.0
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	174[illegible]55	35[illegible]	[illegible]	[illegible]	49392	10.0
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	163[illegible]59	57[illegible]	[illegible]	[illegible]		
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	216023	64[illegible]	[illegible]	[illegible]		
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	209548	41[illegible]	[illegible]	0.7	69794	13.9
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	235997	50[illegible]	[illegible]	1.6	72830	15.7
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	253868	39[illegible]	[illegible]	0.2	60097	9.3
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	332792	57[illegible]	[illegible]	1.7	37005	6.4
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2[illegible]903	46.4	[illegible]	[illegible]	131968	20.4
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1[illegible]728	20.0	[illegible]	[illegible]	107[illegible]	21.[illegible]
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2[illegible]262	29.3	[illegible]	[illegible]	56[illegible]	7.[illegible]
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2[illegible]195	28.8	[illegible]	[illegible]	10[illegible]	12.[illegible]
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1[illegible]117	42.4	[illegible]	[illegible]	[illegible]	4.[illegible]
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3[illegible]474	56.5	4[illegible]7	6	4[illegible]	8.[illegible]
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5[illegible]249	73.7	[illegible]	[illegible]	[illegible]	2.[illegible]
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	17.0	4[illegible]763	76.0	[illegible]	1.[illegible]	[illegible]	4.[illegible]
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	12.5	4[illegible]640	61.1	[illegible]	[illegible]	[illegible]451	10.[illegible]
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4[illegible]581	70.5	[illegible]	[illegible]	12[illegible]807	20.4
17[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4[illegible]090	66.4	6202	0.9	1[illegible]721	16.4

Table C.2. *(cont.)*

Total imports from Asia		Imports from Bombay		Imports from Madras		Imports from Bengal		Imports from S.E. Asia		Imports from China	
Year	Value £	Value £	%	Value £	%	Value £	%	Value £	%	Value £	%
1732	673382	51230	7.6	25164	3-7	44534O	66.1			103583	* 5-4
1733	57O974	63589	11.1	53988	9-5	362 339	63-5	4032	0.7	44014	7-7
1734	719953	70716	9.8	129320	18.0	428932	59-6	4862	0.7	33484	4-7
1735	75i 54[1]	97287	12.9	164372	21.9	400988	53-4	6290	0.8	37777	5-o
1736	613713	44674,	7-3	70694	"•5	408551	66.6	5774	0.9	46211	7-5
1737	589476	47998	8.1	99758	16.9	300671	51.0	7891	I.3	98474	16.7
1738	586412	43042	7-3	77966	13-3	412805	70.4	4820	0.8	47779	8.1
1739	751929	61856	8.2	103867	13-8	450019	59-8	9659	1.3	97326	12.9
1740	578861	11346	2.0	54257	9-4	401163	69-3			90444	15-6
1741	782449	79337	IO.I	121422	15-5	489889	62.6	4897	0.6	52652	6.7
1742	871313	71095	8.2	97972	11.2	560395	64.3	13*29	1.5	106209	12.2
1743	773685	78799	10.2	82139	10.6	475281	61.4	24171	3.1	113295	I4.6
1744	654935	935OI	14-3	74602	11.4	427068	65.2	19859	3-0	39905	6.1
1745	786869	80691	10.3	155626	19.8	449152	57-1	6960	0.9	60036	7.6
1746	781079	42478	5-4	198705	25-4	491955	63.0	20 735	2.7	27206	3-5
1747	793215	3373O	4-3	83870	10.6	460 690	58.1	6035	0.8	168854	21.3
1748	664021	18802	2.8	15560	2-3	379342	57.1	5237	0.8	215705	32.5
1749	657825	71592	10.9	63445	9.6	330360	50.2	6734	1.0	145061	22.1
I75O	1013641	53549	5-3	165433	16.3	5***77	50.4	5857	0.6	239*99	23.6
1751	866767	30984	3.6	153346	17.7	486012	56.1	7636	0.9	*5**37	17.4
1752	864457	49569	5-7	126835	14.7	435796	50.4	6412	0.7	245845	28.4
1753	840050	56627	6.7	133718	15-9	375449	44.7	6983	0.8	230321	27.4
1754	781805	49596	6.3	94029	12.0	324482	4*-5	7010	0.9	272351	34.8
1755	933158	93923	IO.I	70257	7-5	411505	44.1	12788	1.4	310029	33-2
1756	786106	75164	9-6	90160	"•5	33O938	42.1	7692	1.0	243366	31.0
1757	622197	65981	10.6	147271	23-7	69219	11.1	5796	0.9	298473	48.0
1758	642 953	55598	8.6	104050	16.2	288587	44.9	5686	0.9	189032	29-4
1759	737747	47377	6.4	39583	5-4	450384	61.0	8843	1.2	191560	26.0
1760	711340	20369	2.9			366872	51.6			324099	45.6

Table G.3. *Total commodity exports (excluding treasure)*

Year	Value £	% of total	Year	Value £	% of total
1660	17059	24-9	1713	98993	33-o
1661	26751	20.4	1714	74876	22.4
1662	57837	32.5	1715	71512	17.0
1663	39898	22.8	1716	52 348	i3-i
1664	43342	36.6	1717	55637	8.8
1665	28534	51.6	1718	86057	14.3
1666	20621	54.8	1719	96664	13-7
1667	8920	72.3	1720	125814	18.2
1668	6i933	36.1	1721	121513	17.8
1669	68706	37-8	1722	127712	16.6
1670	83473	30.6	1723	126891	16.9
1671	117003	36.5	1724	115649	19-3
1672	**104101**	36.4	1725	91573	14.1
1673	39824	23-3	1726	82 593	13.8
1674	53175	25-5	1727	76993	13.5
1675	"4571	27.7	1728	**100019**	20.8
1676	139614	32.3	1729	98506	154
1677	102470	3i-7	1730	125423	16.6
1678	95254	22.6	i73i	137787	19.7
1679	50483	12.9	1732	H5469	19.0
1680	66742	14-5	J733	139410	25-9
1681	80976	13.1	*734	122087	23.0
1682	137373	18.4	1735	127432	**20.2**
1683	75705	12.6	1736	178954	27-3
1684	59096	**12.1**	1737	182371	24.1
1685	88512	14.8	1738	219366	30.6
1686	113362	27.5	1739	i63559	26.7
1687	32130	9-4	1740	135013	23-5
1688	36575	18.1	1741	269489	34-7
1689	8253	**100.0**	1742	163540	27.2
1690	10239	**100.0**	J743	282167	32.6
1692	39H8	22.4	1744	237714	30.0
1693	43366	22.4	1745	220303	33-3
1694	246 298	74-9	1746	205599	3*-9
1695	76401	23-3	1747	95851	15-7
1696	160658	40.8	1748	207591	18.8
1697	25249	43-7	1749	195409	23.2
1698	50212	13-5	1750	279668	21.6
1699	118657	20.9	i75i	286057	27.6
1700	96979	16.7	1752	366930	26.1
1701	77923	10.3	1753	410449	32.4
1702	66831	20.5	*754	420952	30.4
1706	26632	8.5	1755	275905	29.1
1707	25461	8.3	1756	255906	29.1
1708	67648	13.8	1757	339856	29-9
1709	113198	20.5	1758	304116	38.9
1710	135556	26.6	1759	361494	67.6
1711	182590	33-7	1760	371744	72.2
1712	148952	3i-9			

Table C.4. ***Total exports of treasure***

Year	Value £	% of total	Year	Value £	% of total
1660	51329	75-i	1712	317322	68.1
1661	104520	79-6	1713	201425	67.0
1662	120095	67.5	1714	259442	77.6
1663	135218	77-2	1715	387106	84.4
1664	75020	63.4	1716	3463H	86.9
1665	26745	48.4	1717	573703	91.2
1666	17005	45-2	1718	517703	85.7
1667	3424	27.7	1719	611231	86.3
1668	109655	639	1720	57i195	81.9
1669	113234	62.2	1721	5599H	82.2
1670	189704	69.4	1722	642 246	83.4
1671	203504	63-5	1723	624711	83.1
1672	181567	63.6	1724	484726	80.7
1673	^1295	76.7	1725	556400	85.9
1674	155476	74-5	1726	516834	86.2
1675	299012	72.3	1727	495017	86.5
1676	292327	67.7	1728	381581	79-2
1677	221278	68.3	1729	540 709	84.6
1678	325932	77-4	1730	631066	83.4
1679	340819	87.1	i73i	560820	80.3
1680	394464	85.5	1732	620672	81.0
1681	536798	86.9	1733	399334	74.1
1682	609162	81.6	1734	408985	77.0
1683	524928	87.4	1735	502 840	79.8
1684	429613	87.9	1736	477627	72.7
1685	508595	85.2	1737	575745	75-9
1686	298957	72.5	1738	498464	69.4
1687	309442	90.6	1739	448931	73-3
1688	165943	81.9	1740	440319	76.5
1692	135789	77.6	1741	507484	65-3
^93	150097	77.6	1742	437651	72.8
1694	82430	25-i	1743	584377	67.4
^95	251142	76.7	1744	554085	70.0
1696	232963	59-2	1745	441013	66.7
1697	32510	56.3	1746	43956i	68.1
1698	320473	86.5	1747	513639	84-3
^99	448930	79-i	1748	898254	81.2
1700	482219	83.3	1749	646556	76.8
1701	677633	89.7	1750	1012921	78.4
1702	258433	79-5	i75i	748632	72.4
1703	233389	100.0	1752	1037948	73-9
1704	398086	100.0	1753	854571	67.6
X7<>5	193280	100.0	1754	965617	69.6
1706	285959	9i-5	!755	670904	70.9
1707	281483	9i-7	1756	622558	70.9
1708	422798	86.2	1757	797167	70.1
1709	438956	79-5	1758	478193	61.1
1710	373351	734	1759	173483	32.4
1711	359829	66.3	1760	143400	27.8

Table C.5. *Total exports of broadcloth*

Year	Quantity cloths	Value £	Price £	% of total
1660	495	7344	14.84	10.7
1661	544	8117	14.92	6.2
1662	815	10189	12.50	5-7
1663	1240	17322	13-97	9-9
1664	974	13575	13-94	"•5
1665	685	10258	14.98	18.6
1666	980	12 941	13.21	34-4
1667	300	3538	"•79	28.7
1668	1369	17500	12.78	10.2
1669	1290	16644	12.90	9-i
1670	2 557	33544	13.12	12.3
1671	3461	44425	12.84	13-9
1672	3424	49876	*4-57	17-5
1673	179i	25082	14.00	14.7
1674	1253	18184	i4-5i	8.7
1675	2 592	37933	14.63	9-2
1676	3157	48953	i5-5i	"•3
1677	2785	41764	15.00	12.9
1678	2 979	47424	15-92	11.3
1679	1423	18955	J3-32	4.8
1680	2158	28099	13.02	6.1
1681	3165	44361	14.02	7.2
1682	4696	65820	14.02	8.8
1683	2236	34764	15-55	5-8
1684	1409	18827	I3-36	3-9
1685	3407	40489	11.88	6.8
1686	3670	44176	12.04	10.7
1687	1326	15840	"•95	4.6
1688	802	9695	12.09	4.8
1689	168	1957	".65	23-7
1690	120	1422	".85	13-9
1692	1000	13964	13-96	8.0
1693	618	8404	13.60	4-3
1694	8666	159^3	18.36	48.4
^95	1569	31089	19.81	9-5
1696	5186	89799	17.32	22.8
1697	12	360	30.00	0.6
1698	1922	23494	12.22	6.3
1699	5715	70417	12.32	12.4
1700	4264	48968	11.48	8.5
1701	2163	28760	13-30	3-8
1702	3042	35598	11.70	10.9
1706	1694	17007	10.04	5-4
1707	1185	13135	11.08	4-3
1708	3086	31627	10.25	6.4
1709	6500	72188	11.11	i3-i
1710	6345	75848	"•95	14-9
1711	11200	130790	11.68	24.1
1712	9865	107400	10.89	23.0
1713	6422	70377	10.96	23-4
1714	4299	49211	11.45	14.7
1715	2958	36817	12.45	8.8

Table C.5. *(cont.)*

Year	Quantity cloths	Value £	Price £	% of total
1716	2193	27231	12.42	6.8
1717	1592	18842	11.84	3-o
1718	3129	43571	13-92	7.2
1719	3990	51699	12.96	7-3
1720	6588	77847	11.82	"•3
1721	5406	65203	12.06	9-6
1722	6613	75966	11.49	9-9
1723	573O	68137	11.89	9-i
1724	5186	60921	"•75	10.1
1725	3132	37569	12.00	5-8
1726	35oo	40875	11.68	6.8
1727	3248	37863	11.66	6.6
1728	57O9	66051	"•57	13-7
1729	5255	62620	11.92	9-8
1730	5779	68470	".85	9-i
J73[1]	6633	77867	11.74	11.1
1732	6760	72361	10.70	9-4
1733	7064	77368	JO.95	14.4
1734	3354	44009	13.12	8.3
!735	4154	48158	"•59	7-6
1736	6420	71623	11.16	10.9
[J]737	5319	66006	12.41	8.7
1738	5169	59083	11.43	8.2
1739	5572	64854	11.64	10.6
1740	4757	48792	10.26	8.5
1741	7578	83286	10.99	10.7
1742	5679	61263	10.79	10.2
*743	932i	100786	10.81	11.6
1744	8594	96845	11.27	12.2
1745	6982	84703	12.13	12.8
1746	7703	88203	11.45	13-7
1747	2458	30393	12.36	5-o
1748	10331	117478	"•37	10.6
1749	9238	102868	11.14	12.2
1750	10369	123438	11.90	9-5
i75i	10652	135826	12.75	*3-i
1752	15795	186718	11.82	13-3
1753	16505	198181	12.01	15-7
*754	15242	183912	12.07	13-3
1755	7485	83882	11.21	8.9
1756	5945	66045	11.11	7-5
1757	952O	108955	11.44	9-6
1758	11886	145553	12.25	18.6
1759	12464	158142	12.69	29.6
1760	10065	138528	13.76	26.9

Table G.6. *Total exports of new draperies*

Year	Quantity pieces	Value £	Price £	% of total
1660	9	221	24.56	0.3
1661	160	473	2.96	0.4
1663	299	774	2.59	0.4
1671	1029	"563	11.24	3.6
1672	1735	8922	5-H	3-i
1673	584	4614	7.9O	2.7
1674	133	912	6.86	0.4
1675	305	2 558	8.39	0.6
1676	615	3722	6.05	0.9
1677	610	4320	7.08	i-3
1678	675	3651	54i	0.9
1679	445	2899	6.51	0.7
1680	502	4634	9-23	1.0
1681	910	7994	8.78	1-3
1682	1873	I593O	8.51	2.1
1683	738	3691	5.00	0.6
1684	15	146	9-73	0.0
1685	778	7228	9-29	1.2
1686	1442	9457	6.56	2.3
1687	238	1694	7.12	0.5
1688	1001	3675	3.67	1.8
1690	500	1725	345	16.8
1693	1 79i	954i	5-33	4-9
1694	10622	44385	4.18	13-5
1695	3854	10 733	2.78	3-3
1696	3734	15923	4.26	4.0
1698	440	2171	4-93	0.6
1699	7852	13284	1.69	2.3
1700	4100	I3I35	3.20	2-3
1701	7329	26585	3.63	3-5
1702	4362	15866	3.64	4-9
1706	721	2i99	3.05	0.7
1707	45O	1117	2.48	0.4
1708	2054	4922	2.40	1.0
1709	4720	9546	2.02	i-7
1710	9030	18012	1-99	3-5
1711	6127	14665	2.40	2.7
1712	8222	15773	1.92	34
1713	4737	10276	2.17	34
1714	3277	7723	2.36	2.3
1715	2421	5939	245	1.4
1716	2562	5775	2.25	1.4
1717	4107	9156	2.23	i-5
1718	1315	3105	2.36	0.5
1719	1400	2992	2.14	0.4
1720	3ii9	6544	2.10	0.9
1721	6864	15075	2.20	2.2
1722	7001	14748	2.11	i-9
1723	5610	12696	2.26	i-7
1724	4510	"533	2.56	1-9
1725	344O	8413	245	i-3
1726	5060	11425	2.26	!-9

Table G.6. *(cont.)*

Year	Quantity pieces	Value £	Price £	% of total
1727	4400	10222	2.32	1.8
1728	4820	11 290	2-34	2-3
1729	5470	12606	2.30	2.0
1730	6840	15536	2.27	2.1
1731	8718	18855	2.16	2.7
1732	74*9	16526	2.23	2.2
1733	8758	i9J83	2.19	3.6
1734	9673	23021	2.38	4-3
1735	9447	22596	2.39	3.6
1736	12386	26779	2.16	4.1
1737	12276	27151	2.21	3.6
1738	15688	33440	2.13	4.7
1739	13022	27480	2.11	4-5
1740	8320	H750	I •77	2.6
1741	20497	37435	1r.83	4.8
1742	J4545	28098	1[-93	4-7
J743	18076	33954	1[.88	3-9
1744	14910	27560	11.85	3-5
1745	J9I33	36270	[.90	5-5
1746	15688	32004	2.04	5.0
1747	7924	16314	2.06	2.7
1748	7659	15785	2.06	1.4
1749	^563	34070	2.19	4.0
I750	20184	48465	2.40	3.7
i75i	20386	55335	2.71	5-3
J752	21392	55073	2.57	3-9
1753	22111	56602	2.56	4-5
1754	23396	59176	2.53	4-3
1755	16467	34157	2.07	3.6
1756	15416	30056	i-95	3-4
1757	20217	41254	2.04	3.6
1758	14480	30115	2.08	3.8
1759	18479	40962	2.22	7-7
1760	20088	45585	2.27	8.8

Table C.7. ***Total exports of lead***

Year	Quantity cwt	Value £	Price £	% of total
1660	1984	1984	1.00	2.9
1661	2251	2156	0.96	1.6
1662	2015	2015	1.00	1.1
1663	3538	3515	0.99	2.0
1664	3177	3177	1.00	2.7
1665	3241	3241	1.00	5.9
1666	1129	988	0.88	2.6
1667	287	287	1.00	2.3
1668	7055	7055	1.00	4.1
1669	6039	5059	0.84	2.8
1670	10615	8552	0.81	3.1
1671	15476	12319	0.80	3.8
1672	15201	11482	0.76	4.0
1674	8859	2893	0.33	1.4
1675	6901	5405	0.78	1.3
1676	13628	10226	0.75	2.4
1677	6626	4969	0.75	1.5
1678	9654	7175	0.74	1.7
1679	5138	3596	0.70	0.9
1680	6282	4664	0.74	1.0
1681	4248	3029	0.71	0.5
1682	4300	3194	0.74	0.4
1683	7719	5798	0.75	1.0
1684	12626	9468	0.75	1.9
1685	8369	6276	0.75	1.1
1686	13748	9732	0.71	2.4
1687	1718	1289	0.75	0.4
1688	5731	4011	0.70	2.0
1692	7019	5122	0.73	2.9
1693	8551	6275	0.73	3.2
1694	17748	11351	0.64	3.5
1695	9729	6286	0.65	1.9
1696	13998	12042	0.86	3.1
1697	2401	1683	0.70	2.9
1698	5219	4443	0.85	1.2
1699	9179	6092	0.66	1.1
1700	8141	5492	0.67	0.9
1701	6705	4434	0.66	0.6
1702	5848	3802	0.65	1.2
1706	4800	2400	0.50	0.8
1707	12859	4924	0.38	1.6
1708	16385	8600	0.52	1.8
1709	11037	5933	0.54	1.1
1710	12657	7226	0.57	1.4
1711	6911	3949	0.57	0.7
1712	6897	3730	0.54	0.8
1713	3512	2018	0.57	0.7
1714	2605	1431	0.55	0.4
1715	8208	4617	0.56	1.1
1716	5420	2912	0.54	0.7
1717	18848	10121	0.54	1.6
1718	20744	11604	0.56	1.9

Table G.7. ***(cont.)***

Year	Quantity cwt	Value £	Price £	% of total
1719	12892	7683	0.60	1.1
1720	14256	7905	0.55	1.1
1721	16351	11162	0.68	1.6
1722	14049	9249	0.66	1.2
1723	11415	7748	0.68	1.0
1724	7i	67	0.94	).0
1725	10056	7643	0.76	1.2
1726	10431	8625	0.83	1.4
1727	13007	10713	0.82	1.9
1728	11022	9116	0.83	1.9
1729	8002	6867	0.86	1.1
1730	8853	7745	0.87	1.0
1731	"503	9674	0.84	1.4
1732	15158	11833	0.78	1.5
1733	18103	15239	0.84	2.8
1734	15004	11470	0.76	2.2
1735	11905	8798	0.74	1.4
1736	19319	14707	0.76	2.2
1737	16601	13065	0.79	1.7
1738	22524	17099	0.76	2.4
1739	21202	15895	0.75	2.6
1740	17104	12654	0.74	2.2
1741	21030	15952	0.76	2.1
1742	26213	19751	0.75	3.3
1743	22600	14738	0.65	1.7
1744	20155	14411	0.72	1.8
1745	15100	10697	0.71	1.6
1746	25090	18083	0.72	2.8
1747	13798	9951	0.72	1.6
1748	20500	14530	0.71	1.3
1749	15357	11106	0.72	1.3
1750	17099	11572	0.68	0.9
1751	20998	15334	0.73	1.5
1752	25593	18690	0.73	1.3
1753	24198	19003	0.79	1.5
1754	26830	25010	0.93	1.8
1755	14402	14544	1.01	1.5
1756	13797	12224	0.89	1.4
1757	17199	14762	0.86	1.3
1758	16000	14178	0.89	1.8
1759	10407	8661	0.83	1.6
1760	6903	47'3	0.68	0.9

Table G.8. *Import of chinaware and porcelain {China)*

Year	Value £	% of total	Value sold £	Sale price £	Mark-up
1669	10	0.0	29	0.00	0.00
1685	2746	0.5	5029	0.00	0.00
1686	1477	0.5	1799	0.00	0.00
1688	588	0.4	1550	0.00	0.00
1691	4654	5.6	9774	0.00	0.00
1693	6275	10.4	11366	0.00	0.00
1694	0	0.0	206	0.00	0.00
i695	351	1.2	0	0.00	0.00
1696	0	0.0	12506	0.00	0.00
1697	13067	8.9	779	0.00	0.00
1698	398	0.2	443	0.00	0.00
1699	15282	3-9	18868	0.00	0.00
1700	0	0.0	1842	0.00	0.00
1701	12563	2.1	27553	0.00	0.00
1702	18764	5-o	18017	0.00	0.00
1703	6208	2-5	16689	0.00	0.00
1704	20815	13-3	11522	0.00	0.00
1705	14338	7.0	14008	0.00	0.00
1706	5200	2.5	8510	0.00	0.00
1712	1242	0-3	–	–	–
1713	1347	0.3	–	–	–
1714	3935	0.8	–	–	–
1717	6233	1.2	–	–	–
1718	4835	1.0	–	–	–
1719	3582	0.6	–	–	–
1720	3050	0.5	–	–	–
1721	9395	i.5	–	–	–
1722	9527	i-9	–	–	–
1723	3963	0.5	–	–	–
1724	8576	1.1	–	–	–
1725	2 778	0.6	–	–	–
1726	5587	0.9	–	–	–
1727	2927	0.4	–	–	–
1728	6071	1.1	–	–	–
1729	9599	i-3	–	–	–
1730	11769	i-9	–	–	–
1732	4713	0.7	–	–	–
1733	6006	1.1	–	–	–
1734	5982	0.8	–	–	–
1735	5504	0.7	–	–	–
1736	6873	1.1	–	–	–
1737	11246	i-9	–	–	–
1738	3633	0.6	–	–	–
1739	7012	0.9	–	–	–
1740	7124	1.2	–	–	–
1741	4566	0.6	–	–	–
1742	10377	1.2	–	–	–
1743	"995	1.6	–	–	–
1744	4892	0.7	–	–	–
*745	5767	0.7	–	–	–
1746	2511	0.3	–	–	–

Table C.8. *(cont.)*

Year	Value £	% of total	Value sold £	Sale price £	Mark-up
1747	3579	0.5	—	—	—
1748	6887	1.0	—	—	—
1749	5643	0.9	—	—	—
1750	9296	0.9	—	—	—
1751	4788	0.6	—	—	—
1752	5199	0.6	—	—	—
1753	9507	1.1	—	—	—
1754	10225	1.3	—	—	—
1755	9083	1.0	—	—	—
1756	9291	1.2	—	—	—
1757	5097	0.8	—	—	—
1758	2852	0.4	—	—	—
1759	4795	0.6	—	—	—
1760	7015	1.0	—	—	—

Table C.g. *Imports of coffee {Mokha)*

Year	Quantity cwt	Value £	Import price £	Value as % of total	Quantity sold cwt	Value sold £	Sale price £	Mark-up
1664	401	1138	2.84	0.8	54	491	9-09	3.20
1665	536	755	1.41	o-5	344	3076	8.94	6.35
1666	0	0	0.00	0.0	244	1282	5-25	0.00
1667	381	1004	2.64	2.1	345	1899	5-50	2.09
1668	0	0	0.00	0.0	66	328	4-97	0.00
1669	516	1603	3-"	1.2	669	4437	6.63	2.13
1670	0	0	0.00	0.0	102	613	6.01	0.00
1672	1101	4179	3.80	i-3	1101	7173	6.51	1.72
1673	860	3537	4.11	1.4	132	1082	8.20	J-99
1674	954	3994	4.i9	2.2	139i	8364	6.01	1.44
1675	150	749	4-99	0.4	631	5"7	8.11	1.62
1676	326	^83	4.24	0.4	240	2231	9-3O	2.19
1677	957	3656	3.82	1.1	1018	8561	8.41	2.20
1678	402	1654	4.11	0.5	400	6968	17.42	4-23
1679	787	3276	4.16	0.9	787	7550	9-59	2.30
1680	1155	4735	4.10	I'•3	1155	9413	8.15	i-99
1681	969	3873	4.00	I.0	958	8326	8.69	2.17
1682	1131	4733	4.18	I.1	1131	11147	9-86	2.36
1683	1685	75io	4.46	I.4	1685	12211	7-25	1.63
1684	2571	8368	3-25	I.0	2571	17407	6.77	2.08
1685	1464	10891	7.44	i-9	1464	IO574	7.22	o.97
1686	753	4017	5-33	I.2	753	9010	"•97	2.24
1687	629	2926	4.65	0.9	628	4671	744	1.60
1688	2563	10586	4.13	6.7	2563	23093	9.01	2.18
1690	2668	9821	3.68	8.1	0	0	0.00	0.00
1691	0	0	0.00	0.0	2626	30202	11.50	0.00
1692	287	1323	4.61	5-o	0	0	0.00	0.00
1693	0	0	0.00	0.0	256	3430	13.40	0.00
1696	195	835	4.28	0.5	195	6641	34.06	7-95
1697	1628	5537	34O	3.8	0	0	0.00	0.00
1698	567	2785	4-9i	1.1	2208	31846	1442	2.94
1699	1280	7417	5-79	i-9	1133	14916	I3-I7	2.27
1700	2316	11962	5.16	2.4	2308	25413	11.01	2.13
1701	1468	6689	4.56	1.1	1438	22477	15-63	3-43
1702	90	641	7.12	0.2	50	613	12.26	1.72
1703	157	317	2.02	O.I	158	3748	23.72	"•75
1705	73	1345	18.42	0.7	84	1519	18.08	0.98
1706	2668	12220	4.58	5-8	0	0	0.00	0.00
1707	334	1616	4.84	0.9	25	757	30.28	6.26
1709	1106	593O	5.36	3-o	—	—	—	—
1710	2045	I393I	6.81	3.8	—	—	—	—
1711	4999	26913	5.38	5-9	—	—	—	—
1712	3324	16478	4.96	34	—	—	—	—
1713	6871	34904	5.08	6.5	—	—	—	—
1714	5170	20883	4.04	4.2	—	—	—	—
1715	2998	12609	4.21	4-5	—	—	—	—
1716	2866	6646	2.32	2.0	—	—	—	—
1717	4127	!9335	4.69	3-8	—	—	—	—
1718	12657	765H	6.05	16.5	—	—	—	—
1719	6799	40209	5-9i	6.2	—	—	—	—
1720	8267	46831	5-66	8.1	—	—	—	—

Table G.9. *(cont.)*

Year	Quantity cwt	Value £	Import price £ of	Value as % total	Quantity sold cwt	Value sold £	Sale price £	Mark-up
1721	12703	69687	5-49	10.8	—	—	—	—
1722	13134	77806	5-92	15-3	—	—	—	—
1723	13999	118169	8.44	15-8	—	—	—	—
1724	23852	169806	7.12	21.6	—	—	—	—
1725	7380	48668	6.59	10.8	—	—	—	—
1726	I2OO2	56853	4.74	9-4	—	—	—	—
1728	2500	8893	3-56	1.6	—	—	—	—
1729	16500	66854	4.05	9.0	—	—	—	—
1731	8875	38735	4-36	5-4	—	—	—	—
1732	7349	48065	6.54	7-1	—	—	—	—
1733	8816	43012	4.88	7-5	—	—	—	—
1734	9734	52639	5-41	7-3	—	—	—	—
1735	9129	44827	4-9i	6.0	—	—	—	—
1736	8974	37809	4.21	6.2	—	—	—	—
1737	9030	34684	3.84	5-9	—	—	—	—
1739	8868	29202	3-29	3-9	—	—	—	—
1740	9097	21651	2.38	3-7	—	—	—	—
1741	10976	34252	3.12	4.4	—	—	—	—
1742	5023	22513	4.48	2.6	—	—	—	—
1745	9535	34404	3.61	4.4	—	—	—	—
1747	11245	40036	3-56	5-0	—	—	—	—
1748	5457	29375	5.38	44	—	—	—	—
1749	8946	40633	4-54	6.2	—	—	—	—
1750	9544	38426	4.03	3.8	—	—	—	—
1751	9707	37652	3-88	4-3	—	—	—	—
1753	10187	36952	3-63	44	—	—	—	—
1754	10384	34337	3-3i	44	—	—	—	—
1755	9635	34656	3.60	3-7	—	—	—	—
1756	10136	38786	3-83	4-9	—	—	—	—
1757	9303	35457	3.81	5.7	—	—	—	—

Table C.io. *Imports of Indigo {Bombay)*

Year	Quantity lb	Value £	Import price £	Value as% oftotal	Quantity sold lb	Value sold £	Sale price £	Mark-up
1665	27758	5864	0.2I	3-7	0	0.00	0.00	0.00
1666	1554	117	0.08	2.0	21821	5688	0.26	3.46
1667	27942	1508	0.05	3-i	27317	6508	0.24	4.41
1668	409	314	0.77	6.9	13335	2580	0.I9	0.25
1669	93552	6450	0.07	4.6	71872	19793	0.28	3-99
1670	100874	8561	0.08	3-9	123213	38171	0.3I	3-65
1671	120812	10177	0.08	5.0	121989	25987	0.2I	2.53
1672	H79I7	16014	0.I I	4-9	121256	18699	0.15	1.42
1673	107040	12 395	0.I2	4.8	0	0	0.00	0.00
1674	86617	9344	0.I I	5-2	239624	44138	0.18	1.71
i675	55451	7364	0.13	4.4	68904	9339	0.14	1.02
1676	189784	17745	0.09	5-3	191947	27027	0.14	i-5i
1677	101178	10037	0.IO	3-i	108110	16141	0.15	1.51
1678	106252	10479	0.10	3-2	106322	15270	0.14	1.46
1679	49674	3513	0.07	1.0	56391	7631	0.14	1.91
1680	40558	2761	0.07	0.8	44843	7286	0.16	2.39
1681	96045	7563	0.08	i-9	96562	16668	0.17	2.19
1682	84772	8292	0.IO	2.0	84772	16501	0.19	i-99
1683	110243	8331	0.08	1.6	110243	17670	0.16	2.12
1684	9958o	12372	0.12	i-5	87800	18624	0.21	1.71
1685	20700	4234	0.20	0.7	34495	9365	0.27	i-33
1687	33860	3747	0.I I	1.1	54822	18530	0.34	3-05
1688	114970	12086	0.I I	7.6	97172	27155	0.28	2.66
1689	25348	2500	0.IO	!-9	25348	10364	0.4I	4-i5
1690	10550	346	0.03	0.3	10550	2307	0.22	6.67
1693	67500	5995	0.09	10.0	65525	21620	0.33	3.72
1697	2128	112	0.05	0.I	2016	427	0.2I	4.02
1698	896	47	0.05	0.0	896	96	0.I I	2.04
1699	68768	12977	0.I9	3-3	27552	8505	0.31	1.64
1700	106176	19508	0.l8	3-9	100464	28463	0.28	i-54
1701	44688	9037	0.20	i-5	104272	35585	0.34	1.69
1703	130	3	0.02	0.0	97	8	0.08	3-57
1704	72176	H939	0.21	9-5	74555	37257	0.50	2.41
1706	"5833	17167	0.I5	8.2	2860	!392	0.49	3.28
1707	27303	4103	0.I5	2-3	–	–	–	–
1709	33983	8476	0.25	4-3	–	–	–	–
1710	96544	26512	0.27	7.2	–	–	–	–
1711	38388	"515	0.30	2-5	–	–	–	–
1712	62603	14796	0.24	3-i	–	–	–	–
1723	12149	2574	0.21	0.3	–	–	–	–
1724	11714	2480	0.2I	0.3	–	–	–	–
1726	4368	956	0.22	0.2	–	–	–	–
1728	24899	547i	0.22	1.0	–	–	–	–
1729	65536	12648	0.19	i-7	–	–	–	–
1758	9735	1918	0.20	0.3	–	–	–	–

Table C.n. ***Imports of black pepper {Bombay: Malabar)***

Year	Quantity lb	Value £	Import price £	Value as % of total
1664	268476	6711	0.02	4-9
1665	745733	12457	0.02	7.8
1667	169529	3547	0.02	7.3
1669	358654	7329	0.02	5-3
1670	611132	9874	0.02	4.6
1671	793497	I34I7	0.02	6.6
1672	465352	599i	0.OI	1.8
1673	844687	14078	0.02	5-5
1674	1347384	20935	0.02	11.7
1675	426054	5407	0.OI	3-2
1676	1554047	20262	0.OI	6.1
1677	1096828	15148	0.OI	4-7
1678	643023	9898	0.02	3-o
1679	22881	285	0.OI	0.I
1680	328835	5717	0.02	1.6
1681	870227	J3273	0.02	3-4
1682	1386736	17226	0.OI	4.1
1683	1279818	17819	0.OI	3-4
1684	1318231	18956	0.OI	2.4
1685	1836825	25366	0.OI	4-3
1686	454J5i	7458	0.02	2.3
1687	1022355	14981	0.OI	4.4
1688	1820804	23599	0.OI	H-9
1689	219370	4333	0.02	3-2
1690	1905161	27509	0.OI	22.7
1691	960354	14094	0.OI	16.9
1692	461318	7862	0.02	29.8
1693	329036	4667	0.OI	7.8
1696	975348	15173	0.02	9.7
1697	937727	16374	0.02	11.1
1698	1693976	28854	0.02	11.1
1699	1403041	22855	0.02	5-9
1700	1861950	26955	0.OI	5-4
1701	1319995	18047	0.OI	3.0
1702	130950	2 559	0.02	0.7
1703	1324031	23425	0.02	9-4
1704	642 624	11614	0.02	7-4
1705	179400	2299	0.OI	1.1
1706	554013	8512	0.02	4.1
1707	539 H*	6307	0.OI	3-5
1708	466527	8645	0.02	5.2
1709	392449	7ii5	0.02	3.6
1710	573513	10061	0.02	2.7
1711	675472	"853	0.02	2.6
1712	413002	6210	0.02	i-3
17*3	1197032	22505	0.02	4.2
1714	902572	16862	0.02	3-4
1715	775788	H9H	0.02	5-3
1716	1183400	20020	0.02	5-9
1717	874935	14674	0.02	2.9
1718	598735	11594	0.02	2-5

Table C.u. *(cont.)*

Year	Quantity lb	Value £	Import price £	Value as % of total
1719	2882008	49337	0.02	7.6
1720	1963139	30 733	0.02	5-3
1722	842528	16068	0.02	3-2
1723	506837	956o	0.02	i-3
1724	1007443	18530	0.02	2.4
1725	999269	16372	0.02	3.6
1726	1 748181	29552	0.02	4-9
1727	1144112	20835	0.02	3.0
1728	488510	8110	0.02	i-5
1729	5H699	7310	0.0I	1.0
1730	536549	7233	0.01	1.2
i73i	1 283 360	18771	0.0I	2.6
1732	940959	14136	0.02	2.1
1733	[1]937498	28849	0.0I	5-i
1734	1544988	25907	0.02	3.6
1735	1 734199	34797	0.02	4.6
1736	839540	18507	0.02	3-o
1737	1980650	30270	0.02	5-i
1738	1380866	20348	0.0I	3-5
1739	1273433	21234	0.02	2.8
1740	376332	7695	0.02	!-3
1741	XI95297	23524	0.02	3.0
1742	2722097	50328	0.02	5-8
1743	1847 726	32912	0.02	4-3
1744	1851727	41052	0.02	6-3
1745	2473431	43849	0.02	5.6
1746	1461017	27316	0.02	3-5
!747	472024	8841	0.02	1.1
1749	2877939	45391	0.02	6.9
1750	137i57i	26544	0.02	2.6
i75i	519665	9834	0.02	1.1
1752	1539828	30242	0.02	3-5
1753	1 201237	28471	0.02	3-4
1754	1188288	23829	0.02	3.o
1755	2179820	59643	0.03	6.4
1756	1404300	30620	0.02	3-9
1757	1 789195	40018	0.02	6.4
1758	1453685	34552	0.02	5-4
1759	1267268	28524	0.02	3-9
1760	657255	13980	0.02	2.0

Table G.12. *Import of black pepper {Madras)*

Year	Qµantity lb	Value £	Import price £	Value as % of total
1703	431705	3762	O.O I	i-5
1704	75000	1248	O.O2	0.8
1705	77300	1303	O.O2	0.6
1715	95500	1890	0.02	0.7
1716	148450	2945	0.02	0.9
1717	328914	6413	O.O2	i-3
1718	186286	3688	0.02	0.8
1719	296538	5894	O.O2	0.9
1720	548327	6783	O.OI	1.2
1721	41228	285	0.01	0.0
1722	123652	2059	0.02	0.4
1723	539040	6611	O.OI	0.9
1724	147600	2923	0.02	0.4
1725	436634	7385	O.O2	1.6
1729	18167	118	O.OI	0.0
1730	310123	2298	O.OI	0.4
1736	26161	846	O.O3	O.I
1737	88846	590	O.OI	O.I
1738	286720	2346	O.OI	0.4
1739	36878	619	0.02	O.I
1742	208288	4404	O.O2	0.5
1743	292 289	5469	0.02	0.7
1749	49500	737	O.OI	O.I
1750	246000	3696	0.02	0.4

Table G.13. *Import of black pepper (South East Asia: Bantam and Bencoolen)*

Year	Quantity lb	Value £	Import price £	Value as % of total
1664	899519	"599	0.01	8.4
1665	1479262	16595	0.01	10.5
1667	24646	369	0.01	0.8
1669	2683349	33287	0.01	24.0
1670	3684570	40506	0.01	18.7
1671	2080932	23116	0.01	"•5
1672	7120882	75678	0.01	23.1
1675	4011170	43083	0.01	25-5
1676	3003°59	32157	0.01	9.6
1677	7030937	74926	0.01	23-4
1678	3734056	38923	0.01	12.0
1679	2760146	27190	0.01	7.6
1680	2702546	28835	0.01	8.1
1681	4239118	46538	0.01	11.8
1682	915272	10049	0.01	2.4
1687	401047	2877	0.01	0.8
1689	166550	945	0.01	0.7
1690	1631679	8703	0.01	7.2
1691	303619	2152	0.01	2.6
1696	342 370	2012	0.01	i-3
1698	357508	2055	0.01	0.8
1704	28994	495	0.02	0.3
1705	478838	4196	0.01	2.1
1706	996249	8776	0.01	4.2
1707	920808	8688	0.01	4-9
1708	1511328	14259	0.01	8.6
1710	2353'2	5073	0.02	1.4
1711	292320	2 758	0.01	0.6
1713	537725	2978	0.01	0.6
1714	430770	3007	0.01	0.6
1715	653968	5034	0.01	1.8
1717	688084	3589	0.01	0.7
1718	570815	7292	0.01	1.6
1719	262827	1362	0.01	0.2
1720	743000	10026	0.01	1.7
1722	222898	4049	0.02	0.8
1723	399'8i	5404	0.01	0.7
1726	381142	4307	0.01	0.7
1728	752640	8040	0.01	!-5
i73i	1013600	6202	0.01	0.9
1733	668080	4032	0.01	0.7
1734	806400	4862	0.01	0.7
1735	1039 360	6290	0.01	0.8
1736	896343	5774	0.01	0.9
1737	745472	4559	0.01	0.8
1738	695296	4820	0.01	0.8
1739	1428224	7639	0.01	1.0
1741	801024	4897	0.01	0.6
1742	1837230	i3'29	0.01	i-5
1743	2075195	20426	0.01	2.6

Table G.13. *(cont.)*

Year	Quantity lb	Value £	Import price £	Value as % of total
1744	1772 939	19859	0.01	3.0
1745	927493	6960	0.01	0.9
1746	1891496	20 735	0.01	2.7
1747	1021216	6035	0.01	0.8
1748	861905	5237	0.01	0.8
1749	1095080	6734	0.01	1.0
1750	191026	5857	0.03	0.6
1751	1045651	7636	0.01	0.9
1752	965005	6412	0.01	0.7
1753	1082585	6983	0.01	0.8
1754	1066157	7010	0.01	0.9
1755	1238093	7906	0.01	0.8
1756	1128622	7692	0.01	1.0
1757	1158376	5796	0.01	0.9
1758	997891	5686	0.01	0.9
1759	1237893	8843	0.01	1.2

Table G.14. ***Total imports of black pepper from Asia***

Year	Quantity lb	Value £	Import price £	Value as % of total	Quantity sold lb	Value sold £	Sale price £	Mark-up
1664	1167995	18310	O.O2	13.2	1078314	53998	0.05	3-19
1665	2224995	29052	O.OI	18.3	264542	11410	0.04	3.3O
1666	0	0	O.OO	0.0	571092	34946	0.06	0.00
1667	I94I75	39i6	0.02	8.1	663463	46202	0.07	345
1668	0	0	0.00	0.0	131868	9427	0.07	0.00
1669	3042003	40616	O.OI	29-3	1705851	73148	0.04	3.21
1670	4295702	50380	O.OI	23.2	375O435	146285	0.04	3-33
1671	2874429	36533	O.OI	18.1	4772 536	175684	0.04	2.90
1672	7586234	81669	O.OI	25.0	4802239	197050	0.04	3.81
1673	844687	14078	0.02	5-5	1176107	50920	0.04	3.60
1674	1347384	20935	0.02	11.7	2633181	106302	0.04	2.60
1675	4437224	48490	O.OI	28.7	3348064	113963	0.03	3."
1676	4557106	524J9	O.OI	15.7	4338i97	137036	0.03	2-75
1677	8127765	90074	O.OI	28.1	3950609	121480	0.03	2.77
1678	4377O79	48821	O.OI	15.0	1193014	379*7	0.03	2.85
1679	2783027	27475	O.OI	7-7	7610711	220917	0.03	2-94
1680	3031381	34552	O.OI	9-7	2295021	72601	0.03	2.78
1681	5109345	598i 1	O.OI	15.2	7803644	212517	0.03	2.33
1682	2 302 008	27275	O.OI	6.5	2268374	70 752	0.03	2.63
1683	1279818	17819	O.OI	3-4	2151185	83579	0.04	2-79
1684	1318231	18956	O.OI	2 4	831091	3i 34i	0.04	2.62
1685	1836825	25366	O.OI	4-3	2098588	67337	0.03	2.32
1686	454151	7458	0.02	2-3	1204042	51565	0.04	2.61
1687	1423402	17858	O.OI	5-2	2084472	897"	0.04	343
1688	1820804	23599	O.OI	H-9	1662743	71920	0.04	3-34
1689	385920	5278	O.OI	4.0	43493[1]	19136	0.04	3.22
1690	3536840	36212	O.OI	29.9	1949239	100883	0.05	5-05
1691	1263973	16246	O.OI	19-5	1949037	89330	0.05	3-57
1692	461318	7862	0.02	29.8	1729821	121042	0.07	4.11
1693	329036	4667	O.OI	7.8	480216	29022	0.06	4.26
1694	0	0	0.00	0.0	46696	3009	0.06	0.00
1696	1317718	17185	O.OI	11.0	653378	41884	0.06	4-92
1697	937727	16374	0.02	11.1	1026609	62179	0.06	347
1698	2051484	30909	0.02	11.9	2295476	154702	0.07	447
1699	1403041	22855	0.02	5.9	872926	51795	0.06	3.64
1700	1861950	26955	O.OI	5-4	37788i	19981	0.05	3-65
1701	1319995	18047	O.OI	3.0	2436940	137952	0.06	4.14
1702	130950	2 559	0.02	0.7	429613	37830	0.09	4-5i
1703	1940752	30116	0.02	12.0	882186	532H	0.06	3.89
1704	746618	13357	0.02	8.5	987282	58734	0.06	3-33
1705	735538	7798	O.OI	3.8	644218	34603	0.05	5-07
1706	1550262	17288	O.OI	8.3	283830	17695	0.06	5-59
1707	1459949	14995	O.OI	8.4	36904	2073	0.06	547
1708	1977855	22904	O.OI	13.8	—	—	—	—
1709	392449	7"5	0.02	3.6	—	—	—	—
1710	808825	15134	0.02	4.1	—	—	—	—
1711	967792	14611	0.02	3-2	—	—	—	—
1712	413002	6210	0.02	i-3	—	—	—	—
1713	1734757	25483	O.OI	4.7	—	—	—	—
1714	1333342	19869	O.OI	4.0	—	—	—	—
1715	1525256	21838	O.OI	7.7	—	—	—	—

Table G.14. ***(cont.)***

Year	Quantity lb	Value £	Import price £	Value as % of total	Quantity sold lb	Value sold £	Sale price £	Mark-up
1716	133!850	22965	0.02	6.8	—	—	—	—
1717	1891933	24676	0.01	4-9	—	—	—	—
1718	1355836	22574	0.02	4-9	—	—	—	—
X7X9	3441373	56593	0.02	8.8	—	—	—	—
1720	3254466	47542	0.01	8.2	—	—	—	—
1721	41228	285	0.01	0.0	—	—	—	—
1722	1189078	22176	0.02	4-3	—	—	—	—
1723	1445058	21575	0.0I	2.9	—	—	—	—
1724	1297927	24185	0.02	3-i	—	—	—	—
1725	I435903	23757	0.02	5-3	—	—	—	—
1726	2129323	33859	0.02	5-6	—	—	—	—
1727	1144112	20835	0.02	3.0	—	—	—	—
1728	1241150	16150	0.0I	3-o	—	—	—	—
1729	532866	7428	0.0I	1.0	—	—	—	—
1730	846672	953i	0.0I	1.6	—	—	—	—
I731	2296960	24973	0.0I	3-5	—	—	—	—
1732	940959	14^6	0.02	2.1	—	—	—	—
1733	2605578	32881	0.0I	5-8	—	—	—	—
1734	2351388	30769	0.0I	4-3	—	—	—	—
1735	2 773559	41087	0.0I	5-5	—	—	—	—
1736	2189244	33135	0.02	54	—	—	—	—
1737	30493I9	40106	0.0I	6.8	—	—	—	—
1738	2362882	275H	0.0I	4.7	—	—	—	—
1739	2 738535	29492	0.0I	3-9	—	—	—	—
1740	376332	7695	0.02	i-3	—	—	—	—
1741	1996321	28421	0.0I	3.6	—	—	—	—
1742	4767615	67861	0.0I	7.8	—	—	—	—
1743	4215210	58807	0.0I	7-6	—	—	—	—
1744	3624666	60911	0.02	9-3	—	—	—	—
1745	3400924	50809	0.0I	6.5	—	—	—	—
1746	3352513	48051	0.0I	6.2	—	—	—	—
1747	1493240	14876	0.0I	i-9	—	—	—	—
1748	861905	5237	0.0I	0.8	—	—	—	—
1749	4022519	52862	0.0I	8.0	—	—	—	—
1750	1808597	36097	0.02	3.6	—	—	—	—
i75i	1565316	17470	0.0I	2.0	—	—	—	—
1752	2504833	36654	0.0I	4.2	—	—	—	—
1753	2283822	35454	0.02	4.2	—	—	—	—
1754	2 254445	30839	0.0I	3-9	—	—	—	—
1755	34I79I3	67549	0.02	7.2	—	—	—	—
1756	2532922	38312	0.02	4-9	—	—	—	—
1757	2947571	45814	0.02	74	—	—	—	—
1758	2451576	40238	0.02	6.3	—	—	—	—
1759	2505161	37367	0.0I	5-i	—	—	—	—
1760	657255	13980	0.02	2.0	—	—	—	—

Table G.15. *Import of saltpetre {Bengal)*

Year	Quantity cwt	Value £	Import price £	Value as % of total	Quantity sold cwt	Value sold £	Sale price £	Mark-up
1664	11 789	6186	0.52	4-5	18829	48353	2.57	4.89
1665	I3I77	8193	<).62	5-2	8482	24804	2.92	4.70
1666	0	0	().00	0.0	931	2019	2.17	0.00
1667	0	0	c).00	0.0	2074	4736	2.28	0.00
1669	20734	10570	0.51	7.6	2040	6796	3-33	6.53
1670	20629	IIIOI	(>-54	5-i	26431	65948	2.50	4.64
1671	8453	4773	<>-56	2.4	7423	18543	2.50	4.42
1672	11 776	6611	c).56	2.0	6577	15620	2.37	4.23
1673	17365	8665	c>-50	34	1692	4361	2.58	5-i7
1674	3163	1938	0.61	1.1	15603	43375	2.78	4.54
1675	15863	6410	c>40	3.8	4013	11429	2.85	7-05
1676	H535	8344	(>-57	2-5	26504	68461	2.58	4.50
1677	12387	8796	c).7i	2.7	9040	22756	2.52	3-54
1678	11580	6778	(>-59	2.1	16482	44664	2.71	4.63
1679	16886	11608	().6g	3-3	15162	36982	244	3-55
1680	6434	3500	(>-54	1.0	9194	20570	2.24	4.11
1681	18937	8993	<>47	2.3	6163	J3093	2.12	447
1682	18869	7383	<>-39	i-7	36894	69423	1.88	4.81
1683	20839	7510	c).36	1.4	3850	5875	i-53	4.23
1684	22992	10144	c>44	i-3	5742	11261	1.96	445
1685	11992	5060	c)-42	0.9	10042	20752	2.07	4.90
1686	19889	10605	(>-53	3-3	8227	14181	1.72	3-23
1687	^363	11329	().65	3-3	4899	9852	2.01	3.08
1688	3830	2 347	<).6i	1.5	11616	26770	2.30	3.76
1689	55i6	3484	<).63	2.6	14061	32474	2.31	3-66
1690	4533	2631	(>.58	2.2	21875	67721	3.10	5-33
1691	0	0	().00	0.0	22672	82436	3.64	0.00
1692	6107	2300	().38	8.7	579	2361	4.08	10.83
1693	2004	1268	(3.63	2.1	18490	895"	4.84	7.65
1694	11958	5766	().48	7-3	4360	12980	2.98	6.17
1695	1825	1140	(5.62	3-9	86	247	2.87	4.60
1696	8247	5395	<3.65	3-5	"537	26912	2.33	3-57
1697	5903	3954	<>.67	2.7	2 343	6952	2.97	443
1698	8961	6312	<3.70	2.4	6551	11961	1.83	2-59
1699	"035	7611	<3.69	2.0	9929	22 543	2.27	3-29
1700	5605	3537	<5.63	0.7	12020	23909	i-99	3-i5
1701	12885	10608	().82	1.8	9416	27368	2.91	3-53
1702	4376	3972	c).gi	1.1	8713	17623	2.02	2.23
1703	6044	5356	<>.89	2.1	2 745	13933	5-08	5-73
1704	1941	2251	:1.16	1.4	127	652	5-i3	443
1705	20631	18999	<3.92	9-3	127	652	5-i3	5-57
1706	21037	22771	:[.08	10.9	7746	25680	3.32	3.06
1707	20438	22621	:[.11	12.7	0	0	0.00	0.00
1708	7217	8027	:[.11	4.8	4754	13097	2.75	2.48
1709	7485	10210	[.36	5-i	—	—	—	—
1710	12843	16107	[.25	4-3	—	—	—	—
1711	9092	11029	[.21	2.4	—	—	—	—
1712	13605	13601	[.00	2.8	—	—	—	—
1713	13508	13755	:[.02	2.6	—	—	—	—
1714	12363	10736	(3.87	2.2	—	—	—	—
1715	9620	7256	<5.75	2.6	—	—	—	—

Table G.15. ***(cont.)***

Year	**Quantity** cwt	**Value** £	**Import price** £	**Value as % of total**	**Quantity sold** cwt	**Value sold** £	**Sale price** £	**Mark-up**
1716	10872	9090	0.84	2.7	—	—	—	—
1717	15407	19862	1.29	3-9	—	—	—	—
1718	10604	9"9	0.86	2.0	—	—	—	—
1719	11116	H454	1.03	1.8	—	—	—	—
1720	13772	14396	1.05	2.5	—	—	—	—
1721	16529	15075	0.91	2-3	—	—	—	—
1722	5439	6876	1.26	!-3	—	—	—	—
1723	12993	15003	I-I5	2.0	—	—	—	—
1724	14676	14185	0-97	1.8	—	—	—	—
1725	6025	5ii7	0.85	1.1	—	—	—	—
1726	5093	4827	0.95	0.8	—	—	—	—
1727	23126	25354	1.10	3.6	—	—	—	—
1728	8399	9274	1.10	i.7	—	—	—	—
1729	9396	9652	1.03	i.3	—	—	—	—
1730	10469	9893	0.94	1.6	—	—	—	—
1731	10748	11041	1.03	i.5	—	—	—	—
1732	24686	22271	0.90	3.3	—	—	—	—
1733	17209	17 581	1.02	3-i	—	—	—	—
1734	15534	15999	1.03	2.2	—	—	—	—
1735	22590	19466	0.86	2.6	—	—	—	—
1736	19421	19398	1.00	3-2	—	—	—	—
1737	17072	i575i	0.92	2.7	—	—	—	—
1738	10714	9481	0.88	1.6	—	—	—	—
1739	!947i	16011	0.82	2.1	—	—	—	—
1740	12090	9988	0.83	1-7	—	—	—	—
1741	32917	27179	0.83	3-5	—	—	—	—
1742	45476	36361	0.80	4.2	—	—	—	—
1743	53162	51662	0-97	6.7	—	—	—	—
1744	25149	23785	0-95	3.6	—	—	—	—
1745	28719	28254	0.98	3.6	—	—	—	—
1746	26940	27397	1.02	3-5	—	—	—	—
1747	22286	20698	0.93	2.6	—	—	—	—
1748	15556	16775	1.08	2.5	—	—	—	—
1749	I759I	14906	0.85	2.3	—	—	—	—
1750	4124	4640	1.13	0.5	—	—	—	—
1751	13189	14916	1.13	1-7	—	—	—	—
1752	21692	25928	1.20	3.0	—	—	—	—
1753	16434	19737	1.20	2.3	—	—	—	—
1754	15124	17867	1.18	2-3	—	—	—	—
1755	32581	39528	1.21	4.2	—	—	—	—
1756	33952	32 757	0.96	4.2	—	—	—	—
1757	6324	8261	1.31	ι-3	—	—	—	—
1758	16212	19704	1.22	3-1	—	—	—	—
ʲ759	33165	26695	0.80	3.6	—	—	—	—
1760	19326	15888	0.82	2.2	—	—	—	—

Table C.16. *Import of raw silk (Bengal)*

Year	Quantity lb	Value £	Import price £	Value as % of total	Quantity sold lb	Value sold £	Sale price £	Mark-up
1669	20	5	0.25	0.0	11	8	0.73	2.91
1670	7087	2176	0.31	1.0	7087	3174	0.45	1.46
1671	5322	2488	0.47	1.2	4172	3033	0.73	1.56
1672	x4273	4587	0.32	1.4	10611	6920	0.65	2.03
1673	21874	7275	0.33	2.8	2113	1993	0.94	2.84
1674	2067	716	0.35	0.4	20924	20200	0.97	2.79
1675	2 395	1081	0.45	0.6	2701	3112	1.15	2.55
1676	31570	12137	0.38	3.6	10035	8701	0.87	2.26
1677	0	0	0.00	0.0	14675	16848	1.15	0.00
1678	41833	H949	0.36	4.6	39H9	39309	1.00	2.81
1679	70680	27009	0.38	7.6	71934	70808	0.98	2.58
1680	52725	18991	0.36	5.3	52272	52401	1.00	2.78
1681	124335	49313	0.40	12.5	121735	116252	0.95	2.41
1682	24320	9734	0.40	2.3	22835	18643	0.82	2.04
1683	172859	76130	0.44	14.6	170529	141266	0.83	1.88
1684	103120	43034	0.42	5.4	103689	72730	0.70	1.68
1685	117677	49453	0.42	8.5	117677	87020	0.74	1.76
1686	48574	17800	0.37	5.5	48574	42869	0.88	2.41
1687	"534	35Oi	0.30	1.0	"534	8076	0.70	2.31
1688	3650	1120	0.31	0.7	12282	12282	1.00	3.26
1689	1640	5H	0.31	0.4	1569	1319	0.84	2.68
1691	7184	3262	0.45	3.9	7184	8374	1.*7	2.57
1693	0	0	0.00	0.0	1264	1857	1.47	0.00
1694	45960	14346	0.31	18.1	38671	47455	1.23	3.93
1695	0	0	0.00	0.0	6822	10210	1.50	0.00
1696	28124	11 233	0.40	7.2	29376	40023	1.36	3.41
1697	47620	13660	0.29	9.3	43004	62620	1.46	5.08
1698	4260	1570	0.37	0.6	6399	10672	1.67	4.53
1699	81410	33053	0.41	8.5	67900	9i 177	1.34	3.3i
1700	96340	44071	0.46	8.8	94901	122 381	1.29	2.82
1701	148449	81667	0.55	13.7	111563	148605	1.33	2.42
1702	82305	52310	0.64	14.1	66024	82383	1.25	1.96
1703	21115	17706	0.84	7.i	55712	65408	1.17	1.40
1704	7393	8188	1.11	5.2	23743	25858	1.09	0.98
1705	43810	18782	0.43	9.2	18801	19562	1.04	2.43
1706	3384	1758	0.52	0.8	20924	20298	0.97	1.87
1707	77066	34641	0.45	19.5	—	—	—	—
1708	33213	15122	0.46	9«i	—	—	—	—
1709	34200	18279	0.53	9.2	—	—	—	—
1710	63429	28975	0.46	7.8	—	—	—	—
1711	35865	159*5	0.44	3.5	—	—	—	—
1712	21925	10602	0.48	2.2	—	—	—	—
1713	31512	13653	0.43	2.5	—	—	—	—
1714	40300	17293	0.43	3.5	—	—	—	—
1715	24918	10674	0.43	3.8	—	—	—	—
1716	74717	30717	0.41	9.1	—	—	—	—
1717	100340	67375	0.67	13.4	—	—	—	—
1718	121298	51723	0.43	11.1	—	—	—	—
1719	86050	37345	0.43	5.8	—	—	—	—
1720	41079	16276	0.40	2.8	—	—	—	—
1721	20344	7349	0.36	1.1	—	—	—	—

Table C. 16. ***(cont.)***

Year	Quantity lb	Value £	Import price £ of	Value as % total	Quantity sold lb	Value sold £	Sale price £	Mark-up
1722	16501	7392	0.45	1.4	—	—	—	—
1723	79673	32003	0.40	4.3	—	—	—	—
1724	124933	39272	0.39	6.3	—	—	—	—
1725	121016	45167	0.37	10.0	—	—	—	—
1726	119200	44466	0.37	7.4	—	—	—	—
1727	141349	61041	0.43	8.8	—	—	—	—
1728	193700	87971	0.45	16.2	—	—	—	—
1729	116550	51944	0.45	7.0	—	—	—	—
1730	113595	55014	0.48	9.0	—	—	—	—
1731	94450	49508	0.52	6.9	—	—	—	—
1732	85539	52421	0.61	7.8	—	—	—	—
1733	171695	90442	0.53	15.8	—	—	—	—
1734	209166	94742	0.45	13.2	—	—	—	—
1735	142057	69604	0.49	9.3	—	—	—	—
1736	118708	54500	0.46	8.9	—	—	—	—
1737	155932	75311	0.48	12.8	—	—	—	—
1738	181963	86585	0.48	14.8	—	—	—	—
1739	127782	63004	0.49	8.4	—	—	—	—
1740	129619	59157	0.46	10.2	—	—	—	—
1741	160197	71077	0.44	9.1	—	—	—	—
1742	104749	49550	0.47	5.7	—	—	—	—
1743	90044	44534	0.49	5.8	—	—	—	—
1744	121107	67838	0.56	10.4	—	—	—	—
1745	[illegible]9954	61388	0.51	7.8	—	—	—	—
1746	148045	84350	0.57	10.8	—	—	—	—
1747	94729	64437	0.68	8.1	—	—	—	—
1748	800	589	0.74	0.1	—	—	—	—
1749	22010	17498	0.80	2.7	—	—	—	—
1750	34417	22030	0.64	2.2	—	—	—	—
1751	46000	31550	0.69	3.6	—	—	—	—
1752	82774	61833	0.75	7.2	—	—	—	—
1753	70634	52995	0.75	6.3	—	—	—	—
1754	27199	20724	0.76	2.7	—	—	—	—
1755	60013	44294	0.74	4.7	—	—	—	—
1756	40231	33425	0.83	4.3	—	—	—	—
1758	13581	10989	0.81	1.7	—	—	—	—
1759	44527	42662	0.96	5.8	—	—	—	—
1760	43113	50722	1.18	7.1	—	—	—	—

Table C.17. *Import of raw silk {China)*

Year	Quantity great lb	Value £	Import price £	Value as % of total	Quantity sold great lb	Value sold £	Sale price £	Mark-up
1664	2010	1246	0.62	0.9	0	0	0.00	0.00
1665	0	0	0.00	0.0	1992	2062	1.04	0.00
1675	1421	807	0.57	0-5	0	0	0.00	0.00
1676	812	439	0.54	0.1	2163	2367	1.09	2.02
1678	2020	1353	0.67	0.4	0	0	0.00	0.00
1682	16708	6529	0.39	i-5	16708	11081	0.66	1.70
1684	6176	3642	0.59	0.5	6176	6055	0.98	1.66
1685	4811	2123	0.44	0.4	4811	5699	1.18	2.68
1686	25006	9197	0.37	2.9	25006	14687	0-59	1.60
1688	10601	5877	0.55	3-7	709	453	0.64	i-i5
1689	72478	22684	0.3I	17.0	81627	52 344	0.64	2.05
1690	26766	11923	0.45	9-9	10854	6854	0.63	1.42
1691	31164	13882	0.45	16.6	49675	3^37	0.64	1.44
1694	4936	1499	0.30	i-9	7385	8006	1.08	3-57
1696	0	0	0.00	0.0	6645	4039	0.61	0.00
1697	8120	1917	0.24	i-3	965	1239	1.28	5-44
1699	0	0	0.00	0.0	2309	2387	1.03	0.00
1700	2601	2800	I.08	0.6	2601	2800	1.08	1.00
1701	56172	22881	0.4I	3.8	67358	67848	I.0I	2.47
1702	106189	46160	0.43	12.4	16581	7994	0.48	1.11
1703	5i7[6]4	17574	0.34	7.0	42246	324[J]5	0.77	2.26
1704	73483	30856	0.42	19.7	47055	33651	0.72	1.70
1705	11936	6490	0.54	3-2	87075	73835	0.85	1.56
1706	17995	10782	0.60	5-2	41484	22479	0.54	0.90
1712	1962	838	0.43	0.2	—	—	—	—
1713	14116	59i8	0.42	I.I	—	—	—	—
1714	18395	7898	o-43	1.6	—	—	—	—
1717	10686	4825	0-45	1.0	—	—	—	—
1718	10021	3973	0.40	0.9	—	—	—	—
1723	H337	5676	0.40	0.8	—	—	—	—
1724	39343	15593	0.40	2.0	—	—	—	—
1725	24409	9669	0.40	2.1	—	—	—	—
1729	7214	2473	0.34	0.3	—	—	—	—
1732	77063	30422	0.39	4-5	—	—	—	—
1752	184560	80458	0.44	9-3	—	—	—	—
1753	129777	60655	0.47	7.2	—	—	—	—
1754	194299	88117	0.45	11.3	—	—	—	—
1755	194 79i	91681	0.47	9.8	—	—	—	—
1756	107456	51167	0.48	6.5	—	—	—	—
1757	234756	120316	0.51	19.3	—	—	—	—
1758	130833	81930	0.63	12.7	—	—	—	—
1759	56743	35753	0.63	4.8	—	—	—	—
1760	66123	34555	0.52	4-9	—	•—	—	—

Table C.18. ***Total imports of raw silk from Asia***

Year	Quantity great lb	Value £	Import price £	Value as % of total	Quantity sold great lb	Value sold £	Sale price £	Mark-up
1664	2010	1246	0.62	0.9	0	0	0.00	0.00
1665	0	0	0.00	0.0	1992	2062	1.04	0.00
1669	20	5	0.25	0.0	11	8	0.73	2.91
1670	7087	2176	0.31	1.0	7087	3174	0.45	1.46
1671	5322	2488	0.47	1.2	4172	3033	0.73	1.56
1672	14273	4587	0.32	1.4	10611	6920	0.65	2.03
1673	21874	7275	0.33	2.8	2113	J993	0.94	2.84
1674	2067	716	0.35	0.4	20924	20200	0.97	2-79
1675	3816	1888	0.49	1.1	2701	3112	1.15	2.33
1676	32382	12576	0.39	3.8	12 198	11068	0.91	2.34
1677	0	0	0.00	0.0	^675	16848	1.15	0.00
1678	43853	16302	0.37	5.0	39H9	39309	1.00	2.70
1679	70680	27009	0.38	7.6	71934	70808	0.98	2.58
1680	52 725	18991	0.36	5-3	52272	52401	1.00	2.78
1681	[1]24335	49313	0.40	12.5	121735	116252	0.95	2.41
1682	41028	16263	0.40	3-9	39543	29724	0.75	1.90
1683	172859	76130	0.44	14.6	170529	141266	0.83	1.88
1684	109296	46676	0.43	5-8	109865	78785	0.72	1.68
1685	122 488	51576	0.42	8.8	122488	927J9	0.76	1.80
1686	73580	26997	0.37	8.4	73580	57556	0.78	2.13
1687	"534	350i	0.30	1.0	"534	8076	0.70	2.31
1688	14251	6997	0.49	4.4	12991	12735	0.98	2.00
1689	74118	23198	0.31	17.4	83196	53663	0.65	2.06
1690	26766	11923	0.45	9-9	10854	6854	0.63	1.42
1691	38348	17144	0.45	20.5	56859	40211	0.71	1.58
1693	0	0	0.00	0.0	1264	1857	1.47	0.00
1694	50896	15845	0.31	20.0	46056	5546i	1.20	3.87
1695	0	0	0.00	0.0	6822	10210	1.50	0.00
1696	28124	11233	0.40	7.2	36021	44062	1.22	3.06
1697	55740	15577	0.28	10.6	43969	63859	i-45	5.20
1698	4260	i570	0.37	0.6	6399	10672	1.67	4-53
1699	81410	33053	0.41	8.5	70209	93564	i-33	3.28
1700	98941	46871	0.47	9'3	97502	125181	1.28	2.71
1701	204621	104548	0.51	17.6	178921	216453	1.21	2.37
1702	188494	98470	0.52	26.5	82605	90377	1.09	2.09
1703	72879	35280	0.48	14.1	97958	97823	1.00	2.06
1704	80876	39044	0.48	24-9	70798	59509	0.84	1.74
1705	55746	25272	0.45	12.4	105876	93397	0.88	1-95
1706	21379	12540	0.59	6.0	62408	42 777	0.69	1.17
1707	77066	34641	0.45	19-5	—	—	—	—
1708	33213	15122	0.46	9.1	—	—	—	—
1709	34200	18279	0.53	9-2	—	—	—	—
1710	63429	28975	0.46	7.8	—	—	—	—
1711	35865	I59I5	0.44	3-5	—	—	—	—
1712	23887	11440	0.48	2.4	—	—	—	—
1713	45628	i957i	0.43	3.6	—	—	—	—
1714	58695	25191	0.43	5-i	—	—	—	—
1715	24918	10674	0.43	3.8	—	—	—	—
1716	74717	30717	0.41	9-1	—	—	—	—
1717	111026	72200	0.65	14.4	—	—	—	—

Table G.18. *(cont.)*

Year	Quantity great lb	Value £	Import price £	Value as % of total	Quantity sold great lb	Value sold £	Sale price £	Mark-up
1718	131319	55696	0.42	12.0	—	—	—	—
i7!9	86050	37345	0.43	5.8	—	—	—	—
1720	4io79	16276	0.40	2.8	—	—	—	—
1721	20344	7349	0.36	1.1	—	—	—	—
1722	16501	7392	0.45	1.4	—	—	—	—
1723	94010	37679	0.40	5-i	—	—	—	—
1724	164276	64865	0-39	8.3	—	—	—	—
1725	145425	54836	0.38	12.2	—	—	—	—
1726	119200	44466	0.37	74	—	—	—	—
1727	Hi 349	61041	0.43	8.8	—	—	—	—
1728	193700	87971	0.45	16.2	—	—	—	—
1729	123764	54417	0.44	7-3	—	—	—	—
1730	"3595	55014	0.48	9-o	—	—	—	—
1731	94450	49508	0.52	6.9	—	—	—	—
1732	162602	82843	0.51	12.3	—	—	—	—
1733	171695	90442	0.53	15.8	—	—	—	—
1734	209166	94742	0.45	13.2	—	—	—	—
1735	142057	69604	0.49	9-3	—	—	—	—
1736	118708	54500	0.46	8.9	—	—	—	—
1737	155932	753"	0.48	12.8	—	—	—	—
1738	181963	86585	0.48	14.8	—	—	—	—
1739	127782	63004	0.49	8.4	—	—	—	—
1740	129619	59157	0.46	10.2	—	—	—	—
1741	160197	71077	0.44	9-i	—	—	—	—
1742	104749	49550	0.47	5-7	—	—	—	—
1743	90044	44534	0.49	5-8	—	—	—	—
1744	121107	67838	0.56	10.4	—	—	—	—
1745	"9954	61388	0.51	7.8	—	—	—	—
1746	148045	84350	0.57	10.8	—	—	—	—
1747	94729	64437	0.68	8.1	—	—	—	—
1748	800	589	0.74	0.I	—	—	—	—
1749	22010	17498	0.80	2.7	—	—	—	—
1750	34417	22030	0.64	2.2	—	—	—	—
i75i	46000	3!550	0.69	3.6	—	—	—	—
1752	267334	142 291	0.53	16.5	—	—	—	—
1753	200411	113650	0.57	13-5	—	—	—	—
1754	221498	108841	0.49	J3-9	—	—	—	—
1755	254804	135975	0.53	14.6	—	—	—	—
1756	147687	84592	0.57	10.8	—	—	—	—
1757	234756	120316	0.51	19-3	—	—	—	—
1758	144414	92919	0.64	14-5	—	—	—	—
1759	101270	78415	0.77	10.6	—	—	—	—
1760	109236	85277	0.78	12.0	—	—	—	—

Table G.19. ***Total imports of tea from China***

Year	Quantity lb	Value £	Import price £	Value as % of total	Quantity sold lb	Value sold £	Sale price £	Mark-up
1669	222	120	0.54	0.I	0	0	0.00	7.82
1671	264	20	0.08	0.0	293	235	0.80	10.59
1673	44	50	1.14	0.0	42	50	1.19	1.05
1678	47i3	207	0.04	0.I	0	0	0.00	0.00
1679	340	36	0.I I	0.0	5053	345	0.07	0.64
1682	7	13	0.19	0.0	0	0	0.00	0.00
1685	12070	2422	0.20	0.5	12140	7625	0.63	3-13
1686	5055	37i	0.07	0.0	5055	1118	0.22	3.01
1688	1666	177	0.I I	0.I	1666	430	0.26	2-43
1689	26200	78i	0.03	0.6	26200	6628	0.25	8.49
1690	38390	1723	0.04	1.4	38390	11145	0.29	6.47
1691	12228	471	0.04	0.6	"335	3875	0.34	8.88
1692	6374	1255	0.20	4.8	6374	1400	0.22	1.12
1697	8921	8091	0.91	5-5	8925	8091	0.91	1.00
1699	13082	1581	0.I2	0.4	11 727	8680	0.74	6.12
1701	121417	17638	0.I5	3.0	128303	32783	0.26	1.76
1702	43625	9125	0.21	2-5	32205	10189	0.32	1.5I
1703	*9395	3072	0.l6	1.2	11582	5583	0.48	3.04
1704	19974	4750	0.24	3.0	x3"9	10817	0.82	3-47
1705	2523	2718	1.08	i-3	13944	7974	0-57	0.53
1706	460	47	0.10	0.0	594	574	0.97	9.46
1713	158107	9746	0.06	1.8	—	—	—	—
1714	213499	24416	0.I I	4-9	—	—	—	—
1717	397532	35085	0.09	7.0	—	—	—	—
1718	542443	38000	0.07	8.2	—	—	—	—
1719	516105	39174	0.08	6.1	—	—	—	—
1720	318416	26243	0.08	4-5	—	—	—	—
1721	1 241629	120750	0.10	18.7	—	—	—	—
1722	1355764	98017	0.07	19.2	—	—	—	—
1723	663311	46457	0.07	6.2	—	—	—	—
1724	1078600	76032	0.07	9-7	—	—	—	—
1725	132256	8438	0.06	i-9	—	—	—	—
1726	717236	43896	0.06	7-3	—	—	—	—
1727	265087	i6733	0.06	2.4	—	—	—	—
1728	262911	19701	0.07	3-6	—	—	—	—
1729	1452628	68379	0.05	9-2	—	—	—	—
1730	1710440	113038	0.07	18.5	—	—	—	—
1731	1811115	118721	0.07	16.4	—	—	—	—
1732	1554684	68448	0.04	10.2	—	—	—	—
1733	820422	38008	0.05	6.7	—	—	—	—
1734	727499	27502	0.04	3.8	—	—	—	—
1735	568546	32273	0.06	4-3	—	—	—	—
1736	672089	39338	0.06	6.4	—	—	—	—
1737	1644516	87228	0.05	14.8	—	—	—	—
1738	778498	44146	0.06	7-5	—	—	—	—
1739	1765694	76308	0.04	IO.I	—	—	—	—
1740	1320935	75497	0.06	13.0	—	—	—	—
1741	877370	42156	0.05	5-4	—	—	—	—
1742	1762061	86727	0.05	10.0	—	—	—	—
1743	1645892	88651	0.05	11.5	—	—	—	—
1744	725928	30289	0.04	4.6	—	—	—	—

Table C.i 9. ***(cont.)***

Year	Quantity lb	Value £	Import price £	Value as % of total	Quantity sold lb	Value sold £	Sale price £	Mark-up
1745	883070	48156	0.05	6.1	—	—	—	—
1746	410990	23001	0.06	2.9	—	—	—	—
1747	3168358	158915	0.05	20.0	—	—	—	—
1748	3688082	205823	0.06	31.0	—	—	—	—
J749	2 324755	139418	0.06	21.2	—	—	—	—
1750	4727992	229237	0.05	22.6	—	—	—	—
i75i	2855164	142 195	0.05	16.4	—	—	—	—
1752	3110427	155384	0.05	18.0	—	—	—	—
1753	3254859	153869	0.05	18.3	—	—	—	—
1754	3881264	165611	0.04	21.2	—	—	—	—
1755	3977092	203 763	0.05	21.8	—	—	—	—
1756	3612233	175595	0.05	22.3	—	—	—	—
1757	3735596	168380	0.05	27.1	—	—	—	—
1758	2 795I3O	101017	0.04	15-7	—	—	—	—
1759	3928628	146129	0.04	19.8	—	—	—	—
1760	6199609	280755	0.05	39-5	—	—	—	—

Table G.20. ***Import of textiles {Bombay)***

Year	Quantity pieces	Value £	Import price £	Value as% of total	Quantity sold pieces	Value sold £	Sale price £	Mark-up
1664	i3646g	35745	0.26	25-9	io39g3	67446	0.65	2.48
1665	i644og	36546	0.22	23.0	jg350	7104	0.37	1.65
1666	0	0	0.00	0.0	I5248g	83670	0.55	0.00
1667	1414ig	32 8g7	0.23	67.8	125510	72og6	0.57	2.47
1668	6g62	4242	0.61	92.7	46176	2g58o	0.64	1.05
i66g	165000	3igg5	o.ig	23.0	163548	g5627	0.58	3.02
1670	22283g	49982	0.22	23.0	230145	108588	047	2.10
1671	395563	68114	0.17	33-7	218241	71322	0.33	1.go
1672	256241	44146	0.17	13-5	332 504	i267go	0.38	2.21
1673	327828	60682	o.ig	23.5	112 080	48o4g	0.43	2.32
1674	272323	49450	0.18	27.7	520086	195 344	0.38	2.07
1675	85668	16581	o.ig	9-8	116152	48975	0.42	2.18
1676	387645	go 186	0.23	27.0	400618	178030	0.44	i.gi
1677	281576	67141	0.24	20.g	288 6og	I4ogo4	0.4g	2.05
1678	386 5g 1	77648	0.20	23.8	380 g75	143256	0.38	1.87
i67g	405 gi8	82303	0.20	23.1	4ogi56	184737	0.45	2.23
1680	411487	86507	0.21	24-3	4og687	208643	0.51	2.42
1681	324220	82457	0.25	20.g	325140	I763g6	0.54	2.13
1682	300g68	833g6	0.28	ig.8	—	—	—	—
1683	42375g	118126	0.28	22.6	—	—	—	—
1684	799979	25g255	0.32	32.3	—	—	—	—
1685	544956	H3549	0.26	24.6	—	—	—	—
1686	H3ogg	29850	0.21	g-3	—	—	—	—
1687	244415	63862	0.26	18.8	—	—	—	—
1688	674J9	40879	0.61	25.8	—	—	—	—
i68g	3941	827	0.21	0.6	—	—	—	—
i6go	181202	3^87	0.17	26.1	—	—	—	—
1691	i955i	3291	0.17	3-9	—	—	—	—
i6g2	46258	9771	0.21	37-0	—	—	—	—
i6g3	nog32	12888	0.12	21.5	—	—	—	—
i6g6	75273	16827	0.22	10.8	—	—	—	—
i6g7	10270	2338	0.23	1.6	—	—	—	—
i698	316811	77808	0.25	29-9	—	—	—	—
i6gg	ig246o	53104	0.28	13-7	—	—	—	—
1700	505820	139556	0.28	27.8	—	—	—	—
1701	237726	742og	0.31	12.5	—	—	—	—
1703	144534	50419	0-35	20.1	—	—	—	—
1706	338g8	noog	0.32	5-3	—	—	—	—
i7og	34866	14418	0.41	7.2	—	—	—	—
1710	120806	47494	0.39	12.8	—	—	—	—
1711	143361	68016	0.47	15.0	—	—	—	—
1712	i62 4gg	93866	0.58	194	—	—	—	—
1713	ig2 58o	83883	0.44	15.6	—	—	—	—
1714	204465	88644	0.43	17-9	—	—	—	—
i7ig	82108	25865	0.32	4.0	—	—	—	—
1720	85080	26411	0.31	4-5	—	—	—	—
1722	i7538i	54764	0.31	10.7	—	—	—	—
1723	167360	56323	0.34	7.6	—	—	—	—
1724	311037	84259	0.27	10.7	—	—	—	—
1725	336575	90781	0.27	20.1	—	—	—	—
1726	igo65i	45307	0.24	7-5	—	—	—	—

Table G.20. ***(cont.)***

Year	Quantity pieces	Value £	Import price £	Value as % of total	Quantity sold pieces	Value sold £	Sale price £	Mark-up
1727	5OH5	18950	0.38	2.7	—	—	—	—
1728	7370	3601	0.49	0.7	—	—	—	—
1729	15070	4429	0.29	0.6	—	—	—	—
1730	H929	5231	0.35	0-9	—	—	—	—
1731	45089	17460	0.39	2.4	—	—	—	—
1732	68775	32031	0.47	4.8	—	—	—	—
1733	59280	22210	0.37	3-9	—	—	—	—
1734	99440	32462	0.33	4-5	—	—	—	—
1735	124028	46955	0.38	6.2	—	—	—	—
1736	36660	16046	0.44	2.6	—	—	—	—
1737	40209	15701	0.39	2.7	—	—	—	—
1738	43700	18077	0.41	3-1	—	—	—	—
1739	90308	37810	0.42	5-o	—	—	—	—
1740	10020	3558	0.36	0.6	—	—	—	—
1741	149096	53437	0.36	6.8	—	—	—	—
1742	54J70	20251	0.37	2-3	—	—	—	—
1743	130704	43876	0.34	5-7	—	—	—	—
1744	131 703	50924	0.39	7.8	—	—	—	—
1745	98020	32938	0.34	4.2	—	—	—	—
1746	37830	13795	0.36	1.8	—	—	—	—
1747	69160	23477	0.34	3.0	—	—	—	—
1748	40280	18802	0.47	2.8	—	—	—	—
1749	54920	23299	0.42	3-5	—	—	—	—
1750	59088	25059	0.42	2.5	—	—	—	—
1751	47260	21150	0.45	2.4	—	—	—	—
1752	46703	J9327	0.41	2.2	—	—	—	—
1753	67609	28156	0.42	3-4	—	—	—	—
1754	57218	24154	0.42	3-i	—	—	—	—
1755	75200	30806	0.41	3-3	—	—	—	—
1756	89960	32967	0.37	4.2	—	—	—	—
1757	55260	18832	0-34	3.0	—	—	—	—
1758	40410	15068	0.37	2-3	—	—	—	—
1759	18020	8388	0.47	1.1	—	—	—	—
1760	5955	3378	0.57	0.5	—	—	—	—

Table G.21. *Import of textiles {Madras)*

Year	Quantity pieces	Value £	Import price £	Value as % of total	Quantity sold pieces	Value sold £	Sale price £	Mark-up
1664	112265	48496	043	35-i	107049	127320	1.19	2-75
1665	107279	49888	0.47	31-4	8930	9744	1.09	2.35
1666	0	0	0.00	0.0	87293	104971	1.20	0.00
1667	12295	3766	0.31	7.8	26391	28280	1.07	3-50
1668	0	0	0.00	0.0	11090	13096	1.18	0.00
1669	65815	30056	0.46	21.7	71659	102154	143	3.12
1670	174600	70182	0.40	32.4	165512	172867	1.04	2.60
1671	94567	41152	0.44	20.4	129424	120467	0.93	2.14
1672	232805	108810	0.47	33-3	237796	228691	0.96	2.06
1673	183774	85204	0.46	33-0	80434	81984	1.02	2.20
1674	I595I5	70432	0.44	39-5	307264	292717	0.95	2.16
1675	118365	58568	0.49	34.6	211303	177146	0.84	1.69
1676	205396	87112	0.42	26.0	326631	38i934	1.17	2.76
1677	161704	80376	0.50	25-i	184290	195157	1.06	2.13
1678	203392	109685	0.54	33-7	194 801	219730	i-i3	2.09
1679	277656	145481	0.52	40.9	276351	303 4[1]3	1.10	2.10
1680	253117	131532	0.52	36.9	269439	288728	1.07	2.06
1681	278962	125816	0.45	3i-9	262 743	242149	0.92	2.04
1682	304242	151860	0.50	36.0	—	—	—	—
1683	430506	205261	0.48	39-2	—	—	—	—
1684	773332	313 J96	0.40	39-0	—	—	—	—
1685	34*529	170834	0.50	29-3	—	—	—	—
1686	245238	128687	0.52	39-9	—	—	—	—
1687	365479	163829	0.45	48.1	—	—	—	—
1688	88011	57006	0.65	35-9	—	—	—	—
1689	180068	88055	0.49	65-9	—	—	—	—
1690	38501	16219	0.42	13.4	—	—	—	—
1691	2 793	1709	0.61	2.0	—	—	—	—
1693	12090	599i	0.50	10.0	—	—	—	—
1694	38660	18305	0.47	23.1	—	—	—	—
1696	48657	16134	0.33	10.4	—	—	—	—
1697	42978	I57I3	0.37	10.7	—	—	—	—
1698	175185	64815	0.37	24-9	—	—	—	—
1699	164815	100604	0.61	26.0	—	—	—	—
1700	87734	53553	0.61	10.7	—	—	—	—
1701	236163	172658	0.73	29.0	—	—	—	—
1702	49683	40313	0.81	10.8	—	—	—	—
1703	88442	66122	0.75	26.4	—	—	—	—
1704	62672	46494	0.74	29-7	—	—	—	—
1705	114303	71127	0.62	34-9	—	—	—	—
1706	89630	49540	0.55	23-7	—	—	—	—
1707	102588	57040	0.56	32.0	—	—	—	—
1708	91870	590I4	0.64	35-6	—	—	—	—
1709	96800	55312	0.57	27.7	—	—	—	—
1710	132804	81840	0.62	22.1	—	—	—	—
1711	66600	40668	0.61	9.0	—	—	—	—
1712	161836	98688	0.61	20.4	—	—	—	—
1713	156030	101843	0.65	18.9	—	—	—	—
1714	232940	138566	0.59	27-9	—	—	—	—
1715	148730	83158	0.56	294	—	—	—	—
1716	144489	85523	0.59	254	—	—	—	—

Table C.21. ***(cont.)***

Year	Quantity pieces	Value £	Import price £	Value as % of total	Quantity sold pieces	Value sold £	Sale price £	Mark-up
1717	285645	171148	0.60	34.0	—	—	—	—
1718	91932	55172	0.60	11.9	—	—	—	—
1719	33! 679	196647	0-59	30.4	—	—	—	—
1720	126840	87771	0.69	i5-i	—	—	—	—
1721	260488	143304	0.55	22.2	—	—	—	—
1722	229940	130894	0.57	25-7	—	—	—	—
1723	397575	261606	0.66	35-i	—	—	—	—
1724	333423	180008	0.54	22.9	—	—	—	—
1725	137072	73418	0.54	16.3	—	—	—	—
1726	105490	71354	0.68	11.8	—	—	—	—
1727	167095	118239	0.71	17.0	—	—	—	—
1728	102540	67875	0.66	12.5	—	—	—	—
1729	200305	116357	0.58	15-7	—	—	—	—
1730	54461	34907	0.64	5-7	—	—	—	—
I731	77340	37325	0.48	5-2	—	—	—	—
1732	45520	25164	0.55	3-7	—	—	—	—
1733	83610	53988	0.65	9-5	—	—	—	—
1734	172100	129320	0.75	18.0	—	—	—	—
1735	224820	164372	0.73	21.9	—	—	—	—
1736	101381	69848	0.69	11.4	—	—	—	—
1737	141450	99168	0.70	16.8	—	—	—	—
1738	97837	75620	0.77	12.9	—	—	—	—
1739	120675	103248	0.86	13-7	—	—	—	—
1740	70276	54257	0.77	94	—	—	—	—
1741	H2919	121422	0.85	15-5	—	—	—	—
1742	98599	93568	0.95	10.7	—	—	—	—
x743	100308	76670	0.76	9-9	—	—	—	—
1744	79160	74602	0.94	11.4	—	—	—	—
1745	190663	155626	0.82	19.8	—	—	—	—
1746	274104	198705	0.72	25-4	—	—	—	—
1747	136680	83870	0.61	10.6	—	—	—	—
1748	20189	15560	0.77	2.3	—	—	—	—
1749	101131	62708	0.62	9-5	—	—	—	—
1750	208166	161737	0.78	16.0	—	—	—	—
175i	193225	153346	0.79	17.7	—	—	—	—
1752	170239	126835	0.75	14.7	—	—	—	—
1753	167195	I337i8	0.80	15-9	—	—	—	—
1754	110635	94029	0.85	12.0	—	—	—	—
J755	85209	70257	0.82	7-5	—	—	—	—
1756	100571	90160	0.90	11-5	—	—	—	—
1757	176392	147271	0.83	23-7	—	—	—	—
1758	128421	104050	0.81	16.2	—	—	—	—
1759	42638	39583	0.93	54	—	—	—	—

Table G.22. ***Import of textiles {Bengal)***

Year	Quantity pieces	Value £	Import price £	Value as % of total	Quantity sold pieces	Value sold £	iSale]price :£	Mark-up
1664	24913	16645	0.67	12.0	21131	22070	:[.04	1.56
1665	!9978	12250	0.6l	7-7	5593	3878	(3.69	1.13
1666	7141	4875	0.68	83.0	19280	13299	<5.69	I.OI
1667	0	0	0.00	0.0	3865	5503	:[.42	0.00
1668	0	0	0.00	0.0	3876	4138	:[.07	0.00
1669	8085	5547	0.69	4.0	8148	I0827	:i-33	1.94
1670	22233	11972	0.54	5-5	22482	24'99	][.08	2.00
1671	43276	25814	0.60	12.8	36275	41660	'i-i5	i-93
1672	68132	43177	0.63	13.2	58 79[1]	53603	(D.91	1.44
1673	98108	50948	0.52	19.8	34092	29066	(>.8$_5$	1.64
1674	800	508	0.64	0.3	90637	86539	<5-95	1.50
1675	44005	22241	0.51	13.1	64944	54796	(3.84	1.67
1676	80684	36488	0.45	10.9	123861	92218	(D.74	1.65
1677	75359	42292	0.56	13.2	78345	88157	:[.13	2.01
1678	57174	32489	0.57	10.0	61101	71650	:[.17	2.06
1679	76597	39265	0.51	II.0	85026	103208	:[.21	2.37
1680	67904	46767	0.69	13.1	72414	92177	][.27	1.85
1681	73174	37789	0.52	9.6	83610	101306	][.21	2-35
1682	164479	80639	0.49	19.1	–	–	–	–
1683	45782	17869	0.39	3-4	–	–	–	–
1684	187004	96415	0.52	12.0	–	–	–	–
1685	227788	148810	0.65	25-5	–	–	–	–
1686	203372	100 961	0.50	3i.3	–	–	–	–
1687	77624	56518	0.73	16.6	–	–	–	–
1691	7i 130	34538	0.49	41.4	–	–	–	–
^93	17987	9339	0.52	!5-5	–	–	–	–
1694	89052	36857	0.41	46.5	–	–	–	–
1695	71539	26308	0-37	90.9	–	–	–	–
1696	156411	70490	0.45	45-2	–	–	–	–
1697	[1]25 747	56616	0.45	38.5	–	–	–	–
1698	120314	60257	0.50	23.1	–	–	–	–
1699	180540	119363	0.66	30.8	–	–	–	–
1700	274541	181499	0.66	36.2	–	–	–	–
1701	247704	151205	0.61	25-4	–	–	–	–
1702	213307	165 521	0.78	44-5	–	–	–	–
1703	52494	37270	0.71	14-9	–	–	–	–
1705	36311	24040	0.66	11.8	–	–	–	–
1706	78296	50984	0.65	244	–	–	–	–
1707	66184	42742	0.65	24.0	–	–	–	–
1708	56i74	37021	0.66	22.3	–	–	–	–
1709	116005	76784	0.66	38.5	–	–	–	–
1710	223812	130453	0.58	35-2	–	–	–	–
1711	347572	245329	0.71	54-2	–	–	–	–
1712	282893	200951	0.71	4i-5	–	–	–	–
1713	253493	209569	0.83	38.9	–	–	–	–
1714	193822	146501	0.76	29-5	–	–	–	–
1715	202034	145050	0.72	5i-3	–	–	–	–
1716	271868	172598	0.63	51.2	–	–	–	–
1717	176978	121344	0.69	24.1	–	–	–	–
1718	275752	I739I7	0.63	37-5	–	–	–	–
1719	331294	202928	0.61	31.4	–	–	–	–

Table G.22. ***(cont.)***

Year	**Quantity** pieces	**Value** £	**Import price** £	**Value as %** of total	**Quantity sold** pieces	**Value sold** £	**Sale price** £	**Mark-up**
1720	462875	296037	0.64	51.0	—	—	—	—
1721	490875	274603	0.56	42.5	—	—	—	—
1722	161472	85303	0-53	16.7	—	—	—	—
1723	304595	169342	0.56	22.7	—	—	—	—
1724	289806	155760	0.54	19.8	—	—	—	—
1725	257905	136464	o.53	30.3	—	—	—	—
1726	574639	286911	0.50	47-5	—	—	—	—
1727	822035	418966	0.51	60.2	—	—	—	—
1728	531548	306731	0.58	56.6	—	—	—	—
1729	608121	386744	0.64	52.2	—	—	—	—
1730	528049	366674	0.69	59-9	—	—	—	—
1731	613700	416712	0.68	57-7	—	—	—	—
1732	622058	364154	°-59	54-1	—	—	—	—
1733	530281	249227	0.47	43.6	—	—	—	—
1734	624447	316361	0.51	43-9	—	—	—	—
1735	637646	310134	0.49	4x-3	—	—	—	—
1736	593372	325032	o.55	53-o	—	—	—	—
1737	439956	208254	0.47	35-3	—	—	—	—
1738	560381	316739	0-57	54.0	—	—	—	—
1739	670933	373024	0.56	49.6	—	—	—	—
1740	556141	329932	o.59	57-0	—	—	—	—
1741	693478	387873	0.56	49.6	—	—	—	—
1742	809777	469245	0.58	53-9	—	—	—	—
1743	588030	380762	0.65	49-2	—	—	—	—
1744	449121	331246	0.74	50.6	—	—	—	—
1745	502558	357209	0.71	45-4	—	—	—	—
1746	550290	378482	0.69	48.5	—	—	—	—
1747	547225	374582	0.68	47.2	—	—	—	—
1748	427525	361978	0.85	54-5	—	—	—	—
'749	370365	297956	0.80	45-3	—	—	—	—
1750	461000	484507	1.05	47.8	—	—	—	—
i75i	448041	439546	0.98	50.7	—	—	—	—
1752	403195	348035	0.86	40.3	—	—	—	—
*753	376025	301698	0.80	35-9	—	—	—	—
1754	345267	285891	0.83	36.6	—	—	—	—
1755	38i543	332565	0.87	35-6	—	—	—	—
1756	400133	264756	0.66	33-7	—	—	—	—
1757	82656	60958	0.74	9-8	—	—	—	—
1758	254552	257894	1.01	40.1	—	—	—	—
1759	419995	381027	0.91	51.6	—	—	—	—
1760	329043	300262	0.91	42.2	—	—	—	—

Table G.23. *Import of textiles: silk piece goods {China)*

Year	Quantity pieces	Value £	Import price £	Value as % of total	Quantity sold pieces	Value sold £	Sale price £	Mark-up
1677	19042	8164	0.43	2.5	30181	8i39	0.27	0.63
1678	14760	8329	0.56	2.6	864	1207	I.4O	2.48
1679	12789	8343	0.65	2.3	24549	22581	0.92	1.41
1680	21592	13899	0.64	3-9	23635	25740	I.Og	1.69
1681	8500	4751	0.56	1.2	95oo	10869	1.14	2.05
J7O5	9878	27604	2.79	13-5	—	—	—	—
1708	17520	22915	1.31	13.8	—	—	—	—
1709	5962	2267	0.38	1.1	—	—	—	—
1711	23638	4863	0.21	1.1	—	—	—	—
1712	13064	19398	1.48	4.0	—	—	—	—
1713	18517	25796	!-39	4.8	—	—	—	—
1714	8230	12283	1.49	2.5	—	—	—	—
1717	11218	21848	i-95	4-3	—	—	—	—
1718	15139	21623	i-43	4.7	—	—	—	—
1719	9457	17 34i	1.83	2-7	—	—	—	—
1720	6376	7712	1.21	i-3	—	—	—	—
1721	1003	1823	1.82	0.3	—	—	—	—
1739	39133	14006	0.36	i-9	—	—	—	—
1740	11623	7823	0.67	1.4	—	—	—	—
1741	12588	593O	0.47	0.8	—	—	—	—
1742	27644	9105	o.33	1.0	—	—	—	—
1743	23747	12649	o.53	1.6	—	—	—	—
1744	J79i9	4724	0.26	0.7	—	—	—	—
1745	24120	6113	0.25	0.8	—	—	—	—
1746	15253	1694	O.I I	0.2	—	—	—	—
1747	"315	6360	0.56	0.8	—	—	—	—
1748	6090	2995	0.49	0.5	—	—	—	—
I75O	3000	666	0.22	O.I	—	—	—	—
I75i	10950	4154	0.38	0.5	—	—	—	—
1752	14127	4804	o.34	0.6	—	—	—	—
J753	34433	6290	0.18	0.7	—	—	—	—
1754	20455	8398	0.41	1.1	—	—	—	—
1755	H259	5502	o.39	0.6	—	—	—	—
1756	15906	7313	0.46	0.9	—	—	—	—
1757	12989	4680	0.36	0.8	—	—	—	—
1758	6201	3233	0.52	0.5	—	—	—	—
1759	15205	4883	0.32	0.7	—	—	—	—
1760	11601	1774	0.15	0.2	—	—	—	—

Table G.24. ***Total imports of textiles from Asia***

Year	Quantity pieces	Value £	Import price £	Value as % of total	Quantity sold pieces	Value sold £	Sale price £	Mark-up
1664	273647	100886	0.37	73-0	232173	216836	0.93	2•53
1665	291666	98684	0.34	62.2	33873	20726	**0.61**	1.81
1666	7141	4875	0.68	83.0	259062	201940	0.78	1.14
1667	I537I4	36663	0.24	75-5	155766	105879	0.68	2.85
1668	6962	4242	0.61	92.7	61142	46814	0.77	1.26
1669	238900	67598	0.28	48.7	243355	208608	0.86	2.03
1670	419672	132136	0.31	60.9	418139	305654	0.73	2.32
1671	533406	135080	0.25	66.9	383940	233449	0.61	2'.40
1672	557178	196133	0.35	60.0	629091	409084	0.65	i.85
1673	609710	196834	0.32	76.3	226606	159099	0.70	S{.17
1674	432638	120390	0.28	67.5	917987	5746oo	0.63	S5-25
1675	248038	97390	0.39	57-6	392 399	280917	0.72	1.82
1676	673725	213786	0.32	63.9	851 n o	652182	0.77	55.41
1677	537681	197973	0.37	61.7	581425	432 357	0.74	5.02
1678	661917	228151	0.34	70.1	637741	435843	0.68	i.98
1679	772960	275392	0.36	77-4	795082	6i3939	0.77	5J.17
1680	754100	278705	0.37	78.2	775175	615288	0.79	SJ.15
1681	684856	250813	0.37	63.7	680993	530 720	0.78	58.13
1682	769689	315895	0.41	74-9	803379	648405	0.8l	I•97
1683	900047	341256	0.38	65.2	923000	598403	0.65	[.71
1684	1760315	668866	0.38	83-3	792699	560260	0.71	[.86
1685	1114273	463193	0.42	79-3	776492	558347	0.72	1.73
1686	591709	259498	0.44	80.4	772866	535259	0.69	1•.58
1687	687518	284209	0.41	83-5	963428	781376	0.8l	1.96
1688	155430	97885	0.63	61.7	602198	461475	0.77	[.22
1689	184009	88882	0.48	66.5	35i 149	436129	1.24	I2-57
1690	219703	47806	**0.22**	39-5	210783	378362	1.80	i3.25
1691	93474	39538	0.42	47-3	100207	175186	i-75	<I-.13
1692	46258	977i	**0.21**	37-0	56377	47641	0.85	1[..00
1693	141009	28218	**0.20**	47.0	183548	84711	0.46	i2.31
1694	127712	55162	043	69.5	266538	565501	**2.12**	t*-9i
1695	71539	26308	0.37	90.9	119355	156259	I«3I	3-56
1696	280341	103451	0.37	66.4	199390	397645	i-99	3.40
1697	178995	74667	0.42	50.7	219755	328859	1.50	3-59
1698	612310	202880	0.33	77-8	598865	653899	1.09	3.30
1699	5378i5	273071	0.51	70.5	300863	720927	2.40	i.72
1700	868095	3746o8	0.43	74-7	868095	922485	1.06	2.46
1701	721593	398072	0.55	66.9	620302	967463	1.56	2.83
1702	262990	205834	0.78	554	304300	362673	1.19	1-52
1703	285470	153811	0.54	61.4	248158	445639	1.80	3-33
1704	77051	46494	0.60	29-7	65991	311299	4.72	7.82
1705	160492	122771	0.76	60.2	—	—	—	—
1706	201824	111533	0.55	534	—	—	—	—
1707	168772	99782	0.59	56.0	—	—	—	—
1708	165564	118950	0.72	71.7	—	—	—	—
1709	253633	148 781	0.59	74.6	—	—	—	—
1710	477422	259787	0.54	70.1	—	—	—	—
1711	581171	358876	0.62	79-3	—	—	—	—
1712	620292	412903	0.67	85.3	—	—	—	—
1713	620620	421091	0.68	78.2	—	—	—	—

Table G.24. *(cont.)*

Year	Quantity pieces	Value £	Import price £	Value as % of total	Quantity sold pieces	Value sold £	Sale price £	Mark-up
1714	639457	385994	0.60	77.8	—	—	—	—
i7J5	350764	228208	0.65	80.7	—	—	—	—
1716	416357	258121	0.62	76.6	—	—	—	—
1717	473841	3H340	0.66	62.5	—	—	—	—
1718	382823	250712	0.65	54.0	—	—	—	—
1719	754538	442781	o.59	68.5	—	—	—	—
1720	681171	4J793i	0.61	72.0	—	—	—	—
1721	752 366	4J9730	0.56	65.0	—	—	—	—
1722	566793	270961	0.48	53-2	—	—	—	—
1723	869530	487271	0.56	65.3	—	—	—	—
1724	934266	420027	0.45	53-5	—	—	—	—
1725	731552	300663	0.41	66.7	—	—	—	—
1726	870780	403572	0.46	66.8	—	—	—	—
1727	1039275	556i55	o.54	79-9	—	—	—	—
1728	641458	378207	o.59	69.8	—	—	—	—
1729	823496	507530	0.62	68.5	—	—	—	—
1730	597439	406812	0.68	66.4	—	—	—	—
i73i	736129	471497	0.64	65.2	—	—	—	—
1732	736353	421349	o.57	62.6	—	—	—	—
1733	673171	325425	0.48	57-o	—	—	—	—
1734	895987	478i43	o.53	66.4	—	—	—	—
1735	986494	521461	o.53	69.4	—	—	—	—
1736	73i 4i3	410926	0.56	67.0	—	—	—	—
1737	621615	323J23	0.52	54.8	—	—	—	—
1738	701918	4I0436	0.58	70.0	—	—	—	—
1739	921049	528088	o.57	70.2	—	—	—	—
1740	648060	395570	0.61	68.3	—	—	—	—
1741	998081	568662	o.57	72.7	—	—	—	—
1742	990190	592 169	0.60	68.0	—	—	—	—
1743	842789	513957	0.61	66.4	—	—	—	—
1744	677903	461496	0.68	70.5	—	—	—	—
1745	815361	551886	0.68	70.1	—	—	—	—
1746	877477	592 676	0.68	75-9	—	—	—	—
1747	764380	488289	0.64	61.6	—	—	—	—
1748	494084	399335	0.81	60.1	—	—	—	—
1749	526416	383963	0-73	58.4	—	—	—	—
1750	731254	671969	0.92	66.3	—	—	—	—
i75i	699476	618196	0.88	7i-3	—	—	—	—
1752	634264	499001	o.79	57-7	—	—	—	—
1753	645 262	469862	o.73	55-9	—	—	—	—
J754	533575	412472	o.77	52.8	—	—	—	—
1755	556211	439I30	o.79	47.1	—	—	—	—
1756	606570	395196	0.65	50.3	—	—	—	—
1757	327297	231 741	0.71	37-2	—	—	—	—
1758	429584	380245	0.89	59-i	—	—	—	—
1759	495858	433881	0.88	58.8	—	—	—	—
1760	346599	3054H	0.88	42.9	—	—	—	—

GENERAL GLOSSARY

abbasi	A coin found in Persia, worth about is 4d in the seventeenth century.
anna	A denomination of the *rupee*, 16 annas equalled one rupee.
arrot	Commissioned or wholesale trading.
ashrafi	An Arabic word meaning 'noble' applied to various gold coins.
assamies	Workers who extracted and refined saltpetre in Bihar.
attar	Perfume made from rose petals.
aurang	A term used in Bengal to describe places where the export goods were produced; a group of villages or small towns in the country constituted one aurang.
baghla	A large deep-sea vessel used by Arab, Persian, and Indian traders.
bajri	A species of millet grown as a dry winter crop in India.
band	A term used in Bengal to denote the periodical harvesting of the silk cocoons.
banjara	A hereditary group of travelling grain traders found in India.
banyan or bannian	A Hindu trader, generally of the Vasya caste.
batta	A discount applied to Mughal coins older than the year of mintage or to coins considered non-standard.
Bigha	A Hindu land measure of *c.* 2765 square kilometres, during the Mughal age it varied from one region of India to another.
bum	A double-ended Arab trading vessel.
candy	A large weight used in southern and western India (see Appendix 1).
Chitty	A corruption of the word *chetty* denoting members of the trading castes of south India.
cuttaree	See khatri.
dadni	A term applied to the Company's merchants in Bengal who received a financial advance on contracting the supply of goods; it is derived from the word *dadan* meaning a deposit paid on advance orders or contracts.
dalal	A broker.
dasturi	A customary commission payable on cash transactions.

darogha	An officer of law; mint-masters of Mughal India were generally called *daroghas oftankshal* (q.v.).
dastak	A certificate.
Divali	The Hindu festival of lights held in the autumn. It is the most important religious occasion for the trading communities of India when mutual presents are exchanged.
Doab	The tract between two confluent rivers.
durbar	The court of ruling princes or viceroys in India.
fanam	A south Indian small coin.
farman	The Mughal imperial decree or edict.
faujdar	The Mughal military under-governor of a district.
gallivat	The name used for a kind of galley, or war-boat with oars and of shallow draught. They were armed with about six carvel-guns.
ghats	Steps or mountain ranges in western India.
gomasta	A bailiff or the agent of merchants.
grab	A fighting ship used on the western coast of India mainly by the Maratha privateers. It was a square-rigged ship with two or three masts and armed with about twenty guns.
haj	The pilgrimage to Mecca.
hat	Weekly markets in India.
havildar	A law-enforcing officer of southern India.
husb-ul-hukum	The literal meaning of the words is 'according to order[5] and the phrase was used as the initial formula of a document issued by officers of state on royal authority.
Jagat Sheth	A term literally meaning the merchant of the world, an honorofic title given by the Mughal emperor to great merchants.
jimdar	An Indian dagger.
kappas	A variety of raw cotton.
khatri	A trading and artisan caste found in northern and western India.
kazi	A Muslim judge.
lakh	The Indian word for iooooo.
Hang	A Chinese weight used in the bullion trade equal to 37.6 grams.
mahmudi	A silver coin of Gujarat, worth f of a rupee.
maund	An Indian weight (see Appendix 1).
mela	The periodical fairs held in India.
muhr	The gold coin of Mughal India.
nakhoda	The capital of an Arab or Indian trading vessel.
nishan	An order or permit issued by the Mughal rulers.
pagoda	The gold coin of south India.
pattani	Unspun silk drawn from the cocoons.
picul	A weight used in China trade (see Appendix 1).

pikar	An underbroker, mainly employed in the raw silk trade of Bengal.
pishkash	Presents given at royal courts in India.
qaisariya	Arab markets with roofed galleries and attached court-yards, also cloth markets.
rupee	The silver coin of Mughal India (see Appendix i).
salabad	Prescriptive or customary rights.
seer	A small weight of India, one-fortieth of the *maund.*
shahbandar	A Persian word meaning the harbour-master. He was the chief authority at the ports of the Indian Ocean.
shahi	A Persian coin worth about 4d. Four *shahis* made one *abbasi.*
sherbasse	A variety of Persian raw silk.
shroff	A corruption of the word *sarraf* denoting money changers who also acted as bankers occasionally.
sicca	Coins of the current year's mintage.
salam	A contract of future sale in Islamic law.
suba	A province of Mughal India.
subadar	The Mughal viceroy of a province.
tale	A money weight used in China trade (see Appendix i).
tani	A particular kind of raw silk suitable for making warps.
tankshal	Mughal mints.
tola	An Indian weight used by goldsmiths. One tola was said to be 188.75 grains in 1686.
umara	The plural form of the Arabic word *amir,* a high official of the Mughal government.
vakil	A political agent employed in diplomatic negotiations in India.
verah	Taxes paid by the Gujarati and other Indian merchants at Mokha on their exports and imports.
zamindari	From the word *zamindar* meaning a landholder. Zamindari signifies the legal right to collect government land revenue from the tenants and cultivators of a tract of land, part of which is kept back as the zamindar's profit.

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NOTES

Chapter i

1 Adam Smith, *The Wealth of Nations* (1776), reprinted from the 6th edn (2 vols., London, 1905), vol. 11, bk iv, ch. VII, pt. in, p. 139. In this passage Adam Smith was echoing the view of Abbé Raynal. See Guillaume Thomas François Raynal, *A philosophical and political history of the settlements and trade of the Europeans in the East and West Indies,* tr. J. Justamond (5 vols., London, 1776), 1, 1. For a recent review of this point, see J. H. Elliott, *The Old World and the New i4Q2-i6§o* (Cambridge, 1972), pp. 1-2.
2 *The Wealth of Nations,* vol. 11, bk iv, ch. vn, pt. in, p. 139.
3 *Ibid., pp.* 139-40.
4 *Ibid.,* vol. 1, bk iv, ch. 1, pp. 448-9.
5 For a discussion of Adam Smith's theories on trade, see H. Myint, 'The "Classical theory" of international trade and the underdeveloped countries', *Economic Journal,* 68 (1958), 317-37-
6 See K. Glamann, 'European trade 1500-1750', in Cipolla, Carlo M., ed., *The Fontana Economic History of Europe: the sixteenth and seventeenth centuries* (Glasgow, 1974), pp. 427-34.
7 Ralph Davis, 'English foreign trade, 1660-1700', in Minchinton, W. E., ed., *The growth of English overseas trade in the seventeenth and eighteenth centuries* (London, 1969), pp. 78-120.
8 The theoretical aspects of the problem of growth and the increase in money supply is discussed by Alexander R. E. Chabert, 'More about the sixteenth century price revolution', in Burke, Peter, ed., *Economy and society in early modern Europe: essays from Annales* (London, 1972), pp. 47~54-
9 Elliott, *The Old World and the New,* pp. 54-71.
10 E. J. Hamilton, *American treasure and the price revolution in Spain 1501-1650* (Cambridge, Mass., 1934), pp. 40-2.
11 F. Mauro, 'Towards an "intercontinental model": European overseas expansion between 1500 and 1800', *Economic History Review,* 2nd series, 14 (1961), 1—17.
12 Fernand Braudel, *The Mediterranean and the Mediterranean world in the age of Philip II,* tr. Siân Reynolds (2 vols., London, 1972-3), 1, 543.
13 For an explanation of the concept of'redistributive enterprise', see Chapter 6, p. 114.
14 Adam Smith, *The Wealth of Nations,* vol. 11, bk iv, ch. VII, pt. in, p. 140.
15 Don Geronymo de Uztariz, *The theory and practice of commerce,* tr. John Kippax (2 vols., London, 1751), 11, 10, 14.
16 Uztariz even quoted a passage from *Mémoires sur le commerce des Hollandois dans tous les états et empires du monde* (Amsterdam, 1717) attributed to Pierre Daniel Huet, Bishop of Avranches, to prove his point.
17 Sir Josia Child, *A new discourse of trade* (London, 1693), p. 1.
18 *Ibid.,* pp. 2-8. For a discussion of Child's polemical use of the Dutch policy, see William Letwin, *The origins of scientific economics: English economic thought 1660-1776* (London, 1963), p. 74.
19 Charles Wilson, *Anglo-Dutch commerce and finance in the eighteenth century* (Cambridge, 1941, reprinted 1966), p. 10.
20 See Karl Marx, *Capital,* vol. m, pt. iv, ch. xx. For a critique of Marxist theories of pre-modern trade, see Immanuel Wallerstein, 'The rise and future demise of the world capitalist system: concepts for comparative analysis', *Comparative Studies in Society and History,* 16 (1974), *&1~V5-*
21 Adam Smith, *The Wealth of Nations,* vol. 11, bk iv, ch. VII, pt. in, p. 146.

22 The Dutch East India Company's political and commercial policy in the period immediately after 1602 is discussed in Niels Steensgaard, *Carracks, caravans, and Companies: the structural crisis in the European-Asian trade in the early 17th century* (Copenhagen, 1972), pp. 131-41.
23 *The dawn of British trade to the East Indies as recorded in the Court Minutes of the East India Company 1599-1603,* ed. Stevens, Henry, and Birdwood, George (London, 1886), p. 8.
24 Steensgaard, *Carracks, caravans, and Companies,* pp. 141-2.
25 Minutes of the Committee of Trade, 1660-2, B.M. Additional MS. 25 115, pp. 44-54.
26 *Observations upon the present state of our gold and silver coins 1730,* by John Conduitt, in Shaw, W. A., *Select tracts and documents illustrative of English monetary history 1626-1730* (London, 1896), pp. 212-13.
27 For a brief period Japan was a major source of silver for the Dutch Company. See Iwao Seiichi, 'Japanese foreign trade in the 16th and 17th centuries', *Ada Asiatica: Bulletin of the Institute of Eastern Culture, the Toho Gakkai,* 30 (1976), 1-18, and Kato Eiichi, 'The Japan-Dutch trade in the formative period of the seclusion policy, particularly on the raw silk trade by the Dutch Factory at Hirado, 1620-1640', *ibid.,* 30 (1976), 34-84.
28 On stocks of gold and silver in this period, see F. P. Braudel and F. Spooner, 'Prices in Europe from 1450 toi75o', in Rich, E. E., and Wilson, C. H., ed., *The Cambridge Economic History of Europe: The economy of expanding Europe in the sixteenth and seventeenth centuries* (Cambridge, 1967), iv, 445.
29 See Chapter 8, p. 164.
30 Mauro, 'Towards an "intercontinental model"'; see also Immanuel Wallerstein, *The modern world system: capitalist agriculture and the origins of the European world-economy in the sixteenth century* (New York and London, 1974).
31 For a discussion of the structure of inter-Asian trade, see Chapter 9.
32 B. E. Supple, *Commercial crisis and change in England, 1600-1642: a study in the instability of a mercantile economy* (Cambridge, 1959), pp. 12-13.
33 P. J. Thomas, *Mercantilism and the East India trade* (London, 1926), pp. 106-11.
34 [Sir Josia Child], *The great honour and advantage of the East-India trade to the kingdom* (London, 1697), pp. 36-7; *Considerations on the East India trade,* in J. R. McCulloch, *Early English tracts on commerce,* 2nd edn (Cambridge, 1952), pp. 568-70, 594-5. There is some doubt whether the tract *The great honour and advantage of the East-India trade* was really the work of Child, see Letwin, *The origins of scientific economics,* p. 239. The spelling Josiafh] Child follows the convention of the Company's Despatch Books.
35 See K. N. Chaudhuri, *The English East India Company: the study of an early joint-stock company* 1600-1640 (London, 1965), ch. vn and vm.
36 See Chapter 7, p. 134.
37 See E. B. Schumpeter, *English overseas trade statistics 1697-1808* (Oxford, i960), pp. 1-9.
38 The items included in this figure are calicoes, silks, tobacco, sugar, pepper, tea, coffee, rice, dyestuffs, and raw silk. See Davis, 'English foreign trade 1700-1774', p. 89.
39 These figures are the annual averages of real values given in our statistical tables, see Table c.2, p. 508. The official values are taken from Davis, *ibid.*
40 G. N. Clark, *Guide to English commercial statistics 1696-1782* (London, 1938), p. 86. The authorship of *An essay* was attributed by Sir George Clark to John Oxenford, one of the clerks in the inspector-general's office. But on the basis of evidence discovered recently, T. S. Ash ton ascribed the document to Henry Martin himself, who was inspector-general from 1714 to 1721 and was the known author of *Observations upon the account of exports and imports for 17 years ending at Christmas 1714.* See T. S. Ashton, 'Introduction', in Schumpeter, *English overseas trade statistics 1697-1808,* p. 3.
41 Some of the separate joint-stocks operating within the formal structure of the East India Company during 1641—49 made quite large profits. For the history of the rise of the New Company, see Chapter 18.
42 Davis, 'English foreign trade 1660-1700', pp. 93-4.
43 Davis, 'English foreign trade 1700-1774', pp. 112-13.
44 For an examination of the V.O.C.'s policy towards Asian traders, see M. A. P. Meilink Roelofsz, *Asian trade and European influence in the Indonesian archipelago between 1500 and about 1630* (The Hague, 1962), ch. ix.
45 The Memorie of Alexander Hume, 1730, Stadsarchief Antwerp, General Indische Compagnie (The Ostend Company), 5769.

46 One could add Canton to the names of these two ports, but there the European merchants were subjected to very strict political and commercial control exercised by the Chinese authorities.
47 Roelofsz, *Asian trade and European influence*, pp. 239-45.
48 In the absence of any estimate of the total national income of India during this period, it is of course impossible to make any precise statements about the effects of foreign trade on the structure of the economy.
49 Despatch Book, 23 January 1736, vol. 106, para. 88, p. 612; *ibid.*, 17 June 1748, vol. 110, paras. 5-6, pp. 124-5.

Chapter 2

1 On Adam Smith's views of the East India Company's monopoly, see *The Wealth of Nations*, vol. 11, bk iv, ch. vn, pt in, pp. 146-56.
2 [Sir Robert Walpole], *Some considerations concerning the pub lick funds, the pub lick revenues, and the annual supplies, granted by parliament* (London, 1735).
3 The reference to the events of 1757 as a 'revolution' follows the contemporary convention, see, for example, the General Letter from Fort William to the Court of Directors, 14 July 1757, in Sinha, H. N., ed., *Fort-William-India House Correspondence 1757-1759* (Delhi, 1957)3 P^ra. 2, p. 225. The ultimatum to the Calcutta Council was delivered by Nawazish Muhammad Khan, nephew of Nawab Alivardi Khan, when a squadron of the Royal Navy captured a French ship under charter to an Armenian merchant, see Bengal Public Consultations, 9 November 1745, vol. 17, p. 740.
4 W. R. Scott, *The constitution and finance of the English, Scottish, and Irish joint-stock companies to 1720* (3 vols., Cambridge, 1910-12), vol. 1, ch. 22.
5 For example, the mathematical constant expressing the function between the Company's shipping and goods merely tells us that, if the values of the first varies, that of the second will also vary in a specific way. But it does not tell us why this is so; for that we need more information.
6 The Court of Directors itself was, of course, accountable to the General Court of Proprietors by law, but in practice its mandate to take independent decisions was very wide.
7 It could also be argued that the purpose of private letters was to consolidate the position of the various rival groups within the Court of Directors by establishing vertically integrated coalitions. Many of the servants of the Company were personal nominees of the members of the Directorate, and factions at home often coincided with incipient factions at the Asian settlements.
8 Such problems have been extensively discussed by sociologists. The concept used here is of course derived from Max Weber, *The theory of social and economic organisation*, ed. Talcott Parsons (New York, 1947), p. 328.

Chapter 3

1 For a discussion of the methodological problems, see Fernand Braudel, 'Histoire et sciences sociales, la longue durée', *Annales, économies, sociétes, civilisations*, 13 (1958), 725-53, reprinted as 'History and the social sciences', in Burke, Peter, ed., *Economy and society in early modern Europe: essays from Annales* (London, 1972), pp. 11-42.
2 For the financial history of the Company between 1698 and 1709, see Chapter 18.
3 The original charter of 1657 is now lost, see W. W. Hunter, *A history of British India* (2 vols., London, 1899-1900), 11, 132; for Charles II's charter, see Bodleian Library, MS. Rawlinson B. 516.
4 Hunter, *A history of British India*, 11, 114-17.
5 For a reference to the profits made by Captain Bowrey, see Despatch Book, 11 September 1689, vol. 92, p. 70; for the gains made by another separate trader, Sir George Matthew, see *ibid.*, 28 December 1711, vol. 97, para. 19, p. 388.
6 *Ibid.*, 2 February 1713, vol. 97, para. 65, p. 788.
7 This point is discussed in Chapter 6.
8 The term 'factory' at this time merely signified an establishment for the merchants to carry on business from within a foreign country and it is derived from the word 'factor' meaning an agent employed by the principal merchant. For a discussion of the role of

factors, see T. S. Willan, *Studies in Elizabethan foreign trade* (Manchester, 1959), p. 14. For a reference to the English flag as the flag of St George, see Factory Records Java, vol. 8, part 6, p. 21.

9 In the same category one can place the towns which developed as a result of other European companies, such as Cochin, Pondicherry, and Ghandernagore.

10 H. K. Naqvi, *Urban centres and industries in upper India 1556-1803* (Bombay, 1968).

11 In 1676 it was mentioned that Rajapur on the western coast of India was particularly suitable for the textile trade as it was a fortified town and offered good protection to the weavers: Despatch Book, 8 March 1676, vol. 88, p. 264.

12 Braudel, *The Mediterranean and the Mediterranean World,* 1, 276-8.

13 Original Correspondence, 7 December 1661, vol. 27, No. 2905; *ibid.,* 7 August 1661, vol. 27, No. 2893.

14 Despatch Book, 27 March 1661, vol. 86, p. 17; Court Book, 17 October 1660, vol. 25, p. 309.

15 Jean Baptiste Tavernier, *Travels in India,* tr. V. Ball and ed. W. Crooke, 2nd edn (2 vols., London), I, 5; John Fryer, *A new account of East India and Persia being nine years' travels 1672—1681,* ed. W. Crooke (3 vols., London, 1909—1915), 1, 219-20.

16 John Ovington, *A voyage to Surat in the year i68g,* ed. H. G. Rawlinson (London, 1929), PP-131-33-

17 *Despatches to England ijig-ij27 {Fort St. George),* 22 January 1726, 22 January 1726, para. 49, p. 125.

18 Fryer, *A new account of East India,* 1, 219.

19 Factory Records Surat, 3 August 1759, vol. 45, p. 2.

20 Original Correspondence, 11 March 1695, vol. 50, No. 5984. The Julfa referred to was of course the famous suburb of Isfahan inhabited by Armenians under Shah Abbas. On Bombay's slow commercial progress, see also Original Correspondence, 15 March 1679, vol. 39, No. 4563, para. 105, p. 26.

21 Despatch Book, 15 March 1678, vol. 88, p. 529.

22 The Tellicherry Factory was established in 1682 and that of Anjengo in the Travancore state in 1684. They were fortified around 1700. Factory Records Surat, 28 August 1682, vol. 108, pp. 146-53; Original Correspondence, 28 July 1684, vol. 44, No. 5206, para. 29; for the treaty between the Company and the Queen of Attinga, see *ibid.,* 29 June 1694, vol. 50, Nos. 5921-2.

23 For the foundation grant of Madras, see 22 July (August) 1639, Original Correspondence, vol. 17, No. 1690. For the Company's reference to the rise of the town, see Despatch Book, 20 December 1699, vol. 93, pp. 258-60.

24 Alexander Hamilton, *A new account of the East Indies,* ed. W. Foster (2 vols., London, 1930), 1, 199, 203. (First published in 1727.)

25 *The Diaries of Streynsham Master 1675-1680,* ed. Sir Richard Temple (2 vols., London, 1911), 11, 113.

26 *The Diary and Consultation Book of Fort St. George 1684,* ed. A. T. Pringle (Madras, 1895), pp. 13, 153. Om Prakash, 'The European trading companies and the merchants of Bengal 1650-1725', *Indian Economic and Social History Review,* 1(1964), 37-63.

27 Despatch Book, 28 August 1682, vol. 90, p. 21; *ibid.,* 5 September 1683, vol. 90, p. 218.

28 Factory Records Surat, 23-6 July 1616, vol. 84, printed in *Letters received by the East India Company from its servants in the east,* vol. iv, p. 327.

29 Thomas Bowrey, *A geographical account of countries round the Bay of Bengal i66g to i6yg,* ed. Sir Richard Temple (Cambridge, 1905), p. 172.

30 Factory Records Calcutta, 24-8 August 1690, vol. 1.

31 Despatch Book, 21 November 1699, vol. 93, para. 5, p. 238. For an earlier statement, see *ibid.,* 11 September 1689, vol. 92, p. 74.

32 Original Correspondence, 30 September 1696, vol. 52, No. 6279, para. 34.

33 'A Relac̃on of the Scituation and Trade of Gamboja, also Syam, Tunkin, Chyna, and the Empire of Japan from Quarles Browne in Bantam', in Factory Records Java, *c* 1661, vol. 4, p. 4.

34 On the fall of Bantam, see Factory Records Java, 11 March 1682, vol. 7, pp. 65-7.

35 Despatch Book, 19 October 1683, vol. 90, para. 1, p. 223.

36 *Ibid.,* 14 January 1686, vol. 91, para. 25, p. 37.

37 For the origin and development of the voyages to China and Japan in the seventeenth

century, see D. K. Bassett, 'The trade of the East English India Company in the Far East, 1623-1684", *Journal ofthe Royal Asiatic Society,* 1-4 (i960), 32-47, 145-57.

38 H. B. Morse, *The chronicles of the East India Company trading to China 1635-1834* (5 vols., Oxford, 1926-9), 1, 66-77.

39 'Instructions to China Supercargoes', Despatch Book, 13 December 1710, vol. 97, para. 11, pp. 19-20.

40 *Fort William-India House Correspondence 1757-1759,* 10 January 1758, para. 113, p. 282; *ibid.,* 23 March 1759, para. 55, p. 142.

41 On the harsh treatment and the wretched condition of the Company's bleachers of cloth in Madras, see *Despatches from England 1728—1729 {Fort St. George),* 23 January 1730, para. 27, p. 67.

Chapter 4

1 It was partial because the Company's expectations were jointly determined by its entire trading organisation taken as a whole. The equilibrium of a settlement could be affected by changes elsewhere irrespective of its own internal state.

2 The most interesting exception to this generalisation was the decision of the Calcutta Council to keep a factory at Patna where the members of the Council had important commercial interests. But the Company was not always consistent about the decision to close down the Patna Factory.

3 Despatch Book, 12 July 1675, vol. 88, p. 190; Original Correspondence, 6 December 1675, vol. 36, No. 4143, pp. 1-2.

4 *Ibid.,* 22 January 1677, vol. 37, No. 4258, p. 14.

5 Despatch Book, 20 April 1708, vol. 96, para. 8, p. 347; *ibid.,* 4 February 1709, vol. 96, para. 27, p. 434.

6 *Ibid.,* 27 March 1714, vol. 98, para. 49, p. 328.

7 *Ibid.,* 10 March 1698, vol. 93, para. 4, p. 46; *ibid.,* 12 January 1705, vol. 93, para. 5, p. 401, para. 32, p. 409.

8 *Fort William-India House Correspondence 1748-1756,* ed. K. K. Datta (Delhi, 1958), 23 January 1754, para. 46, p. 19.

9 Despatch Book, 5 January 1711, vol. 97, para. 48, p. 133.

10 *Ibid.,* 5 October 1737, vol. 107, para. 18, p. 220.

11 Report of the Committee of Correspondence, 13 December 1723, vol. 1, p. 88.

12 Despatch Book, 27 February 1719, vol. 99, para. 38, p. 677.

13 *Ibid.,* 18 September 1665, vol. 86, p. 499; Original Correspondence, 16 March 1666, vol. 29, No. 3157.

14 Despatch Book, 24 March 1663, vol. 86, p. 248; *ibid.,* 16 December 1663, vol. 86, pp. 336-7; *ibid.,* 16-21 February 1670, vol. 87, pp. 328-9; *ibid.,* n August 1670, vol. 87, p. 368; *ibid.,* 22 February 1671, vol. 87, p. 424.

15 Original Correspondence, 20 November 1670, vol. 31, No. 3515, p. 26.

16 For the effects of these local wars on Surat investment, see Original Correspondence, 3 April 1678, vol. 39, No. 4541.

17 Despatch Book, 5 January 1681, vol. 89, paras. 40-3, p. 254.

18 Original Correspondence, 24 January 1681, vol. 40, No. 4716, para. 8, p. 5.

19 Despatch Book, 5 July 1682, vol. 90, para. 5, p. 1.

20 *Ibid.,* 28 August 1682, vol. 90, p. 27.

21 *Ibid.,* 2 April 1683, vol. 90, p. 128.

22 *Ibid.,* 16 November 1683, vol. 90, p. 4L.

23 *Ibid.,* 3 October i960, vol. 92, para. 10, p. 111.

24 *Ibid.,* 18 January 1706, vol. 95, para. 5, p. 482.

25 *Ibid.,* 2 February 1713, vol. 97, para. 8, p. 769.

26 *Ibid.,* 24 February 1721, vol. 100, para. 77, pp. 520-1.

27 The Company refused to reduce the level of exports because it was afraid of the competition from the newly founded Ostend Company, see *ibid.*

28 Despatch Book, 11 February 1732, vol. 105, para. 127, p. 454.

29 *Ibid.,* 9 January 1719, vol. 99, para. 64, p. 646.

30 Despatch Book, 10 January 1711, vol. 97, para. 25, p. 167.

31 *Ibid.*, 20 March 1713, vol. 98, para. 1, p. 16.
32 *Ibid.,* 25 March 1724, vol. 102, para. 20, p. 241.
33 *Despatches from England 1737-1740 {Fort St. George),* 21 March 1740, para. 30, p. 100; Despatches to Bombay, 31 March 1756, vol. 996, para. 84, p. 379.
34 *Despatches from England 1715-1718 (Fort St. George),* 25 January 1717, para. 34, p. 78.
35 *Despatches from England 1748-1749 (Fort St. George),* 27 January 1749, para. 13, p. 21.
36 Despatch Book, 17 June 1748, vol. 110, paras. 1-3, p. 123.
37 Despatches to Bombay, 29 March 1758, vol. 996, para. 21, p. 587.
38 Factory Records Fort St George, 10 January 1663, vol. 14, pp. 289-90; Despatch Book, 16 December 1663, vol. 86, p. 336.
39 Factory Records Surat, 25 July 1670, vol. 3, p. 77; Despatch Book, 11 August 1670, vol. 87, p. 368.
40 *Ibid.,* 21 December 1664, vol. 86, p. 442; *ibid.,* 16-21 February 1670, vol. 86, p. 329; *ibid.,* 29 November 1670, vol. 86, p. 403.
41 Abstract of Letters Received from Coast and Bay, 31 January 1722, vol. 2, para. 54, p. 319; Factory Records Surat, 20 September 1724, vol. 11, p. 20; Bengal Public Consultations, 17 January 1751, vol. 24, p. 35.
42 Despatch Book, 11 February 1732, vol. 105, para. 59, p. 439.
43 *Ibid.*, 9 February 1737, vol. 107, para. 25, pp. 183-4.
44 Abstract of Letters Received from Coast and Bay, 24 December 1739, vol. 4, para, 101, p. 308, on Nadir Shah's invasion and Bengal's general immunity from the financial effects.
45 Despatch Book, 21 September 1671, vol. 87, p. 473.
46 *Ibid.,* 16 December 1663, vol. 86, p. 353.
47 *Ibid.,* 24 December 1675, vol. 88, p. 215; Original Correspondence, 23 July 1676, vol. 37, No. 4215, para. 41.
48 Factory Records Fort St George, 10 January 1663, vol. 14, p. 299; Original Correspondence, 1 June 1671, vol. 32, No. 3567, p. 6.
49 *Ibid.*, 3 April 1678, vol. 39, No. 4541, p. 1.
50 See a report from Agra in 1645, *The English Factories in India 1642-1645,* p. 300.
51 For a discussion of Mathuradas's dealings with the Company, see S. Chaudhuri, *Trade and commercial organisation in Bengal 1650—1J20* (Calcutta, 1975), pp. 74-9.
52 Original Correspondence, 16 January, 1695, vol. 50, No. 5960, pp. 3-4. Annesley was dismissed in 1698 for putting the blame on brokers when he himself was embezzling the Company's cash, see Despatch Book, 13 May 1698, vol. 93, p. 80.
53 *Despatches from England 1719-1727 (Fort St. George),* 22 January 1726, para. 39, p. 124. Reports of the Committee of Correspondence, 25 January 1727, vol. 19, p. 9. *Despatches to England 1736-1740 (Fort St. George),* 29 January 1737, para. 25, p. 27. Factory Records Surat, 19 May 1743, vol. 27, pp. 174-5.
54 Despatch Book, 16 February 1670, vol. 87, p. 322; Original Correspondence, 12 January 1674, vol. 34, No. 3921, p. 4; Despatch Book, 20 February 1706, vol. 95, para. 1, p. 500; *ibid.*, 17 June 1748, vol. no, para. 7, p. 101.
55 *Ibid.*, 2 August 1669, v°l- 87, p. 275; *The Diary and Consultation Book of 1714 (Fort St. George),* 12 February 1714, p. 23.
56 Despatch Book, 5 March 1675, vol. 88, p. 174.
57 *Ibid.*, 24 December 1675, vol. 88, p. 220.
58 *Ibid.*, 12 December 1677, vol. 88, para. 54, p. 496; *The Diary and Consultation Book of 1670-1680 (FortSt. George),* 13 January 1679, p. 2.
59 *The Diary and Consultation Book of 1678-1679 (Fort St. George),* 13 August 1678, p. 101; *The Diary and Consultation Book of 1679-1680 (Fort St. George),* 1 February 1679, p. 13.
60 *The Diary and Consultation Book of 1697 (Fort St. George),* 28 June 1697, pp. 72-3.
61 Despatch Book, 21 December 1722, vol. 101, para. 9, p. 365; *ibid.,* 31 January 1735, vol. 106, para. 9, p. 406.
62 *Ibid.,* 3 February 1741, vol. 108, para. 16, p. 353.
63 *Despatches from England 1681-1686 (Fort St. George),* 27 October 1683, p. 66.
64 Despatch Book, 12 March 1731, vol. 105, paras. 1-13, pp. 224-6.
65 *Ibid.*, 18 January 1671, vol. 87, p. 417; *ibid.*, 6 June 1694, vo^ 92? para. 6, p. 371; *ibid.*, 19 December 1739, vol. 108, para. 25, p. 16.
66 *Ibid.,* 9 March 1703, vol. 95, para. 13, p. 74.
67 *Ibid.,* 26 August 1698, vol. 93, para. 24, p. 99.

68 *Ibid.,* 5 March 1675, vol. 88, p. 175; Original Correspondence, 17 January 1676, vol. 36, No. 4163, p. 1.
69 Despatch Book, 26 May 1692, vol. 92, p. 270.
70 *Ibid.,* 31 August 1661, vol. 86, p. 52.
71 Original Correspondence, 10 April 1682, vol. 43, No. 4952; Despatch Book, 10 March 1698, vol. 93, para. 8, p. 58.
72 *Ibid.,* 29 November 1670, vol. 87, pp. 384-5.
73 *Ibid.,* 8 February 1738, vol. 107, para. 25, p. 416.
74 *Ibid.,* 25 April 1725, vol. 102, para. 80, p. 554.
75 Private Correspondence of Robert Adams, 14 January 1732, 14 November 1732; Home Miscellaneous Series, vol. 37, p. 179
76 *Ibid.,* 30 November 1730, vol. 37, p. 48.
77 Despatch Book, 28 September 1687, vol. 91, para. 37, p. 420.

Chapter 5

1 See Appendix 1.
2 See Chapter 2, p. 28.
3 An inventory taken in Surat in 1736 of the Factory's records shows that complete sets of account books and other documents went back to 1704. Factory Records Surat, 19 February 1736, vol. 20, pp. 60-1.
4 See Court Book, 16 October 1668, vol. 30, p. 317; Reports and Resolution of the Committee of Correspondence, 25 April 1727, vol. 19, p. 2; 'An account of the quantity of tea sold by the East India Company 1716-32', Memoranda of the Committee of Correspondence, vol. 100; Trices of Bombay goods for each year from 1732 to 1737', *ibid.,* vol. 101. See also Chapter 16, n. 21, p. 606.
5 Despatch Book, 28 March 1740, vol. 108, para. 92, pp. 182-3.
6 The Parliamentary Reports and other material of this type are very scattered, but copies may be found in the Home Miscellaneous Series, India Office Records, and among the Company's papers in the Public Records Office, the British Museum, and the Bodleian Library, Oxford.
7 The absence of statistical time-series records in the Company's archives of course does not entirely prove that such records were not regularly kept. It is possible that the two subcommittees, the Committee of Treasure and Export, and the Committee of Warehouses, had their own separate minutes and accounts which have now disappeared completely.
8 See Chapter 12, p. 300.
9 For a lucid discussion of the methodological problems, see Frédéric Mauro, *VExpansion Europknne (1600-1800),* 2ndedn (Paris, 1967), pp. 289-94.
10 For export values during 1601-40, see K. N. Chaudhuri. *The English East India Company,* Table in, p. 115.
11 It must be pointed out that the capital of the Company in 1660, which was £369 891, appears modest only when it is compared with the sums raised later, as for example in 1709 when the Company's total subscribed stock was over £3 million. But it was by no means modest compared with the previous scale of operations and by the standards of mid-seventeenth century it would have been considered large.
12 The rate of the Dutch Company's growth in the second half of the seventeenth century can be measured from the following figures given by Glamann. The invoice value of its imports in 1648-50 was 6.3 million florins. In 1668-70 it was 10.8 million, and in 1698-1700 15.0 million. K. Glamann, *Dutch Asiatic trade 1620-1740* (Copenhagen and The Hague, 1958), p. 13.
13 When a correlation test was made with the exports lagged by one and two years, the two-year lag gave a much better result.
14 Consider the following passage from the chapter on colonies, 'Such a rich country as Holland, on the contrary would probably, in the case of a free trade, send many more ships to the East Indies than it actually does. The limited stock of the Dutch East India Company probably repels from that trade many great mercantile capitals which would otherwise go to it.' Adam Smith, *The Wealth of Nations,* vol. 11, bk iv, ch. vn, p. 146.

15 F. P. Braudel and F. Spooner, Trices in Europe from 1450 to 1750', in *The Cambridge Economic History of Europe,* iv, 430.
16 Despatch Book, 27 March 1661, vol. 86, pp. 17, 19.
17 Glamann, *Dutch Asiatic trade,* p. 12.
18 *Ibid.,* Table 26, p. 143; Despatch Book, 16 February 1670, vol. 86, p. 333.
19 Bengal Public Consultations, 7 June 1753, vol. 26, pp. 164-5.
20 For a similar explanation of the economic condition of Bengal during the 1740s, see Memorie of Jan Kersseboom, 14 February 1755, Kol. Arch. 2791.
21 For an earlier analysis of this kind, see *Despatches to England 1733-1735 {Fort St. George),* 31 January 1734, para. 9, pp. 19-20; *ibid.,* 31 August and 2 September 1734, para. 34, p. 42.
22 Adam Smith, *The Wealth of Nations,* vol. 1, bk 1, ch. ix, p. 200; Richard Cantillon, *Essai sur la nature du commerce en general,* ed. H. Higgs (London, 1931), p. 160.
23 See Chapter 8, p. 158.
24 For a discussion of these problems, see Carlo M. Cipolla, 'The so-called "Price Revolution" : reflections on "the Italian Situation"', and Alexandre R. E. Chabert, 'More about the sixteenth century price revolution', in Burke, ed., *Economy and society in early modern Europe.*
25 Adam Smith, *The Wealth of Nations,* vol. 1, bk 1, ch. xi, p. 201.
26 It should be pointed out here that in the price-series which are being analysed we come across the problem of missing values. In order to overcome it, we adopted the method of least-squares linear interpolation. After the first run, the zero values were replaced with the predicted values and the series recomputed. The moving-average was calculated on the basis of this final series.
27 The series is compiled from the Ledgers and Journals of the Bengal accounts department of the Company. The rice was regularly purchased in the interior wholesale markets for shipment to Madras and to the St Helena plantations. During the scarcity of 1711 in Bengal, it was brought from Balasore for sale in Calcutta. At the time of the great price rise of 1752-3, J. Z. Holwell, the zamindar of Calcutta, reported to the Council that the nawab had forbidden the Company's rice importers to buy rice at the wholesale markets of Bakarganj which supplied most of the town's needs. See Bengal Public Consultations, 9 July 1711, vol. 2, p. 103; *ibid.,* 24 May 1753, vol. 26, p. 154; *ibid.,* 19 November 1753, vol. 26, p. 336.

Chapter 6

1 Abstract of Letters Received from Bombay, 28 December 1721, vol. 449, para. 12, p. 411.
2 Ovington, *A voyage to Surat,* pp. 225-38.
3 *The embassy of Sir Thomas Roe to India i6i5~i6ig,* ed. W. Foster (London, 1926), pp. 250, 303.
4 'To the Governor General &ca. for the Privileged Netherland East India Company', Amsterdam 1635-6, B.M. Additional MS. 34123, p. 38.
5 *The travels ofPietro della Valle in India,* ed. E. Grey (2 vols., London, 1892), 11, 417-19.
6 Original Correspondence, 7 January 1689, vol. 48, No. 5671, p. 5.
7 Muhammad Hashim, Khafi Khan, *Muntakhabul Lubab,* printed in Sir H. M. Elliot and J. Dowson, *The history of India as told by its own historians* (8 vols., London, 1867-77), vn, 344-5, 354. Khafi Khan incorporated in his history works of other writers.
8 *Ibid.,* VII, 345.
9 Bengal Public Consultations, 17 June 1718, vol. 3, p. 534; Abstract of Letters Received from Bombay, 30 October 1718, vol. 449, para. 56, p. 303.
I o *The embassy of Sir Thomas Roe*, p. 303.
I1 See C. H. Alexandrowicz, *An introduction to the history of the law of nations in the East Indies* (Oxford, 1967), p. 46.
12 Khafi Khan, *Muntakhabul Lubab*; Elliot and Dowson, *History of India,* VII, 345.
13 See Pedro Alvares Cabral's commission of 1500, *The voyage of Pedro Alvares Cabral to Brazil and India,* ed. W. B. Greenlee (London, 1938), p. 180.
14 'Mr. Hungerford's opinion upon the 33rd paragraph in the Governour and Councel's Letter dated Fort St. George January 20th 1727/8', Memoranda of the Committee of Correspondence, vol. 101 (no pagination).

15 Factory Records Surat, 20 April 1675, vol. 88, p. 43.
16 Abstract of Letters Received from Bombay, 20 December 1718, vol. 449, para. 30, p. 322.
17 Despatch Book, 1 o January 1711, vol. 97, para. 83, pp. 179-80.
18 For example, see Despatch Book, 28 February 1728, vol. 104, para. 34, p. 216.
19 For a discussion of the concept of protection costs in long-distance trade, see F. C. Lane, 'National wealth and protection costs', in Lane, F. C, *Venice and history: the collected papers of Frederick C. Lane* (Baltimore, 1966), pp. 373-82.
20 For a discussion of the term 'redistributive enterprise', see Steensgaard, *Carracks, caravans, and Companies,* pp. 111-15. The views of Karl Polanyi are evaluated in Sabloff, Jeremy A., and Lamberg-Karlovsky, C. C, ed., *Ancient civilization and trade* (Albuquerque, New Mexico, 1975). See also Polanyi, Karl, Arensberg, C. M., and Pearson, H. W., ed., *Trade and markets in the early empires* (New York, 1957).
21 J. N. Sarkar, *The history ofAurangzib,* 2nd edn (5 vols., Calcutta, 1952), vol. v, pp. 257, 261.
22 Steensgaard, *Carracks, caravans, and Companies,* p. 88.
23 Despatch Book, 29 September 1673, vol. 88, p. 69.
24 *Ibid.,* 3 December 1679, vol. 89, p. 115.
25 In 1686 Child wrote to Madras that the interlopers and the Dutch were responsible for disturbing the Company's ancient 'peaceable way' and that as to these two parties 'we look upon the Mogoll's Governours but as instruments which we hope to compell by fair means or foul to use us better hereafter', *ibid.,* 9 June 1686, vol. 91, p. 145.
26 For Child's views on this point, see *ibid.,* 14 January 1686, vol. 91, para. 25, pp. 37, 47; *ibid.,* 9 June 1686, vol. 91, p. 142, p. 145; *ibid.,* 28 September 1687, vol. 91, par. 36, p. 419.
27 *Ibid.,* 11 September 1689, vol. 92, p. 64.
28 For an account of the Company's war plans and the actual events, see Hunter, *A history of British India,* 11, 247-66.
29 Despatch Book, 30 May 1690, vol. 92, p. 103.
30 *Ibid.,* 13 May 1691, vol. 92, para. 2, p. 161.
31 *Ibid.,* 29 March 1717, vol. 99, para. 38, p. 220.
32 *Ibid.,* 8 January 1718, vol. 99, para. 45, p. 375.
33 *Ibid.,* 27 February 1719, vol. 99, para. 44, pp. 679-83.
34 *Ibid.,* 28 September 1687, vol. 91, para. 5, p. 412. Child died in 1699, see *ibid.,* 3 August 1699, vol. 94, p. 73.
35 *Ibid.,* 12 January 1705, vol. 95, para. 26, p. 407; Abstract of Letters Received from Bombay, 1 May 1711, vol. 449, para. 16, p. 162; *Despatches to England iyi4-1J15 (Fort St. George),* 13 September 1715, para. 56, p. 80.
36 Despatch Book, 1 December 1725, vol. 103, para. 54, p. 80.
37 *Ibid.,* 25 March 1724, vol. 102, para. 57, p. 254.
38 Abstract of Letters Received from Bombay, 11 August 1724, vol. 450, para. 35, p. 13.
39 Despatch Book, 29 January 1724, vol. 102, para. 87, p. 221.
40 Factory Records Surat, 23 February 1734, vol. 18, p. 203.
41 *Ibid.,* 22 January 1734, vol. 18, p. 94.
42 Despatch Books, 11 February 1732, vol. 105, paras. 87-8, p. 445; Abstract of Letters Received from Coast and Bay, 26 December 1733, vol. 3, paras. 57-8, pp. 340-1.
43 Despatch Book, 23 January 1736, vol. 106, para. 88, p. 612.
44 Factory Records Kasimbazar, 19 November 1733, vol. 5, pp. 2-3. Haji Ahmed sent a copy of the letter to the English President.
45 Bengal Public Consultations, 18 June 1733, vol. 9, pp. 343-4.
46 *The Diary and Consultation Book of 1723 (Fort St. George),* 1 May and 3 May 1723, pp. 47-8.
47 Khafi Khan, *Muntakhabul Lubab,* in Elliot and Dawson, *History of India,* vn, 351.
48 Despatch Book, 8 January 1718, vol. 99, para. 55, p. 378.
49 *Ibid.,* 30 September 1684, vol. 90, para. 16, p. 364.
50 *Ibid.,* 18 January 1706, vol. 95, para. 50, p. 522.
51 *Ibid.,* 8 January 1718, vol. 99, para. 55, pp. 378-9.
52 Bombay Public Proceedings, 20 October 1732, vol. 7, pp. 44-5.
53 Original Correspondence, 29 December 1695, vol. 51, No. 6139.
54 Despatch Book, 19 November 1719, vol. 100, para. 63, p. 21; *ibid.,* 25 April 1725, vol. 102, para. 51, p. 546.
55 Morse, *East India Company in China,* 1, 99.
56 For the survey of the Company's customs privileges in the Mughal Empire, see Original

Correspondence, 20 April 1680, vol. 40, No. 4699, and S. Chaudhuri, 'The myth of the English East India Company's trading privileges in Bengal, 1651-1686', *Bengal Past and Present,* 89 (1970), 287-92.

57 Despatch Book, 28 December 1711, vol. 97, para. 71, pp. 449-50.
58 Home Miscellaneous Series, vols. 69-71.
59 Bengal Public Consultations, 14 March 1716, vol. 3, p. 177.
60 Despatch Book, 30 October 1717, vol. 99, para. 8, p. 265.
61 Abstract of Letters Received from Bombay, 20 December 1718, vol. 449, para. 9, pp. 316-17.
62 Despatch Book, 28 December 1711, vol. 97, para. 71, pp. 449-50; *ibid.,* 23 January 1730, vol. 104, para. 54, p. 676; *ibid.,* 6 February 1733, vol. 105, para. 54, p. 672.
63 *Ibid.,* 27 March 1714, vol. 98, para. 84, p. 342.
64 Original Correspondence, 20 April 1680, vol. 40, No. 4699; Despatch Book, 28 March 1740, vol. 108, para. 72, p. 177.
65 See p. 110.
66 See also the quotation from the Despatch Book given in Chapter 13, p. 327.
67 Abstract of Letters Received from Bombay, 26 April 1710, vol. 449, para. 14, p. 143.
68 Abstract of Letters Received from Coast and Bay, 17 August 1717, vol. 2, para. 44, p. 110.
69 Bombay Public Proceedings, 29 November 1723, vol. 5 (no pagination).
70 Despatch Book, 21 July 1738, vol. 107, para. 11, p. 441.
71 For the details of the Surat 'revolution' of 1732, see Factory Records Surat, vol. 16, and the private correspondence between Sir Robert Cowan, the governor of Bombay, and Henry Lowther, the Chief of the Surat Factory, P.R.O. Belfast, The Londonderry Estate, Private Papers of Sir Robert Cowan, India Office Records, Microfilm Reel Nos. 2033-4.
72 Factory Records Surat, 17 March 1732, vol. 16, pp. 35-7.
73 Bengal Public Consultations, 13 March 1727, vol. 6, p. 397; *ibid.,* 28 December 1727, vol. 6, p. 540; *ibid.,* 22 November 1731, vol. 8, pp. 495-6.
74 *Ibid.,* 24 January 1730, vol. 8, p. 166.
75 *Ibid.,* 9 November 1745, vol. 17, pp. 739-40.

Chapter 7

1 The Company's selling methods and the decision-rules on goods offered for sale are discussed in greater details in Chapter 12. In this chapter there is an outline of the main facts and their theoretical implications.
2 For a discussion of this point relating to the first half of the seventeenth century, see K. N. Chaudhuri, *The English East India Company,* pp. 147-50.
3 *Despatches from England 1721-1724 (Fort St. George),* 2 February 1725, para. 21, p. 123; Despatch Book, 15 February 1716, vol. 97, para. 13, p. 780; *ibid.,* 27 January 1742, vol. 108, para. 76, p. 515.
4 Court Book, 26 September 1617, vol. 4, p. 13.
5 Despatch Book, 28 June 1717, vol. 99, para. 23, p. 249.
6 A Dutch historian has drawn attention to the specialised functions existing in the Netherlands' pre-industrial markets and he has classified them according to those who handled imports, those who stored and dealt in certain types of commodities, and those engaged in specific branches of export trade. See T. P. van der Kooy, *Hollands stapelmarkt en haar verval* (Amsterdam, 1931). Steensgaard has summarised van der Kooy's views: see *Carracks, caravans, and Companies,* pp. 13-14.
7 There was a second homeward sailing in the spring but it was much less important than the summer arrivals.
8 Steensgaard has rightly stressed this point when he writes, 'The market's concentration of supply and demand gave both the buyers and the sellers a greater chance of carrying out a planned transaction at the planned time. Furthermore, the conditions under which the transaction could be carried out became more predictable and information concerning prices and quantities became more easily accessible.' *Carracks, caravans, and Companies,* pp. 14-15.
9 Despatch Book, 6 January 1738, vol. 107, paras. 41-2, p. 371.
10 The construction of the curve would of course have to be historical through the comparison of invited bid prices at successive sales.

11 See Chapter 12, p. 301.
12 J. G. van Leur, *Indonesian trade and society: essays in Asian social and economic history* (The Hague, 1955), p. 132. Van Leur himself carefully distinguished between the small peddling trader and large wholesale merchants to be found in India and China.
13 Van Leur, *Indonesian trade and society,* p. 217. The reference was taken from H. Terpstra, *De opkomstder Westerkwartieren van de Oost-Indische Compagnie* (The Hague, 1918), p. 253.
14 Court Book, 5 January 1670, vol. 30, p. 609; Despatch Book, 4 January 1716, vol. 98, para. 3, p. 645; Braudel, *The Mediterranean and the Mediterranean world,* 1, 490-1.
15 Despatch Book, 21 December 1722, vol. 101, para. 17, p. 367.
16 Steensgaard, for example, admits that the peddling trade could make use of fairly sophisticated commercial methods but he concludes, 'Nevertheless, the ordinary entrepreneur operates on the pedlar level, and there is nothing in the sources to indicate the existence of comprehensive coordinated organisations - of an Armenian, Turkish or Persian version of a Fugger, Cranfield or Tripp'. *Carracks, caravans, and Companies,* p. 30. The merchants of the Middle East, particularly the Armenian and Jewish houses, have not yet been studied in sufficient depth to make such a conclusive generalisation.
17 L. Khachikian, 'Le registre d'un marchand Arménien en Perse, en Inde et au Tibet (1682-1693)', *Annales,* 22 (1967), 231-78.
18 Tavernier, *Travels in India,* 1, 32-3.
19 Original Correspondence, 30 November 1676, vol. 37, No. 4215, para. 17, p. 11.
20 For a contemporaneous description of one such merchant, Khwaja Wazid, see Memorie of Jan Kersseboom, 14 February 1755, Kol. Arch. 2791.
21 *The Diary and Consultation Book of1680—1 (Fort St. George),* 28 March 1680, p. 20.
22 *The English Factories in India 1661-1664,* p. 308.
23 Original Correspondence, 28 April 1636, vol. 15, No. 1558; *The English Factories in India 1634—1636,* p. 218.
24 For a study of such partnerships, see F. C. Lane, 'Family partnerships and joint ventures', in F. C. Lane, *Venice and history: the collected papers of Frederick C. Lane,* pp. 36-55.
25 Van Leur, *Indonesian trade and society,* p. 214.
26 See Factory Records Egypt and Red Sea, 4 July 1733, vol. 2, No. 324, para. 8, p. 253.
27 *Despatches to England 1733-1735 (Fort St. George),* 31 January 1734, p. 20.
28 Factory Records Egypt and Red Sea, 30 May 1732, vol. 2, No. 268, p. 93. Francisco Pelsaert, *Jahangir's India: the Remonstrantie of Francisco Pelsaert,* ed. W. H. Moreland and P. Geyl (Cambridge, 1925), p. 41.
29 Adam Smith, *The Wealth of Nations,* vol. 1, bk iv, ch. n, p. 454.
30 For a discussion of the present-day bazaar type of economy in Indonesia, see C. Geertz, *Peddlers and princes: social change and economic modernisation in two Indonesian towns* (Chicago, 1963).
31 For a statement of such motivation on the part of sellers, see Factory Records Java, 30 January 1671, vol. 4, p. 74.
32 Pelsaert, *The Remonstrantie,* p. 1; *The travels of Pietro della Valle,* 1, 96; François Bernier, *Travels in the Mogul empire A.D. 1656-1668,* ed. A. Constable (London, 1891), p. 248.
33 On Masulipatam's trade, see Christopher Hatton's 'Accompt of the Trade of Metchlepatam', 9 January 1677, in *The diaries of Master,* 11, 113-15. See also Hamilton, *A new account of the East Indies,* 11, 12, 128.
34 A complete list of the ships and their cargo was annually sent to Batavia by the V.O.C.'s officials in Hugli, which was copied from the Mughal registers of customs. These lists provide a comprehensive picture of the Indian coastal trade.
35 Original Correspondence, 1 December 1616, vol. 4, No. 411; *Letters received,* iv, 249.
36 Factory Records Surat, 10 May 1670, vol. 3, p. 65.
37 In discussing the caravan trade Steensgaard has stated that voluntary speculative stock formation, 'the second hand', was apparently only an exceptional occurrence, and that the market lacked buffers in the shape of middlemen. This generalisation is certainly not true of the primary nodal markets and even for the caravan trade is overstated. See Steensgaard, *Carracks, caravans, and Companies,* pp. 56—7.
38 Factory Records Surat, 20 November 1672, vol. 3, p. 31.
39 Abstract of Letters Received from Bombay, 31 January 1713, vol. 449, para. 42, p. 117.
40 Pelsaert, *The Remonstrantie,* p. 16.
41 The Indian system of advance part payment of goods to be delivered later can be traced

to the Islamic law *oisalam* sales. For a discussion of the point, see Chapter 11, p. 256.

42 'The agreement and contract made by the Agent and Gouncell with the Metchlepatam marchants for the investments to be made there for accompt of the Honourable English India Company', 31 March 1679, printed in *The diaries of Master*, 11, 146-51.

43 *Ibid.*, 149.

44 Despatch Book, 9 March 1703, vol. 95, para. 27, p. 78; *ibid.*, 28 December 1711, vol. 97, para. 50, p. 397.

45 *Despatches to England 1711-1714 (Fort St. George)*, 14 October 1712, paras. 64-9, p. 50.

46 Bengal Public Consultations, 21 July 1731, vol. 8, p. 419; *ibid.*, 26 July 1731, p. 424; *ibid.*, 9 August 1731, p. 434.

47 The Court of Directors did not react kindly to the Council's support for the broker and wrote back, 'In the 73rd para, our late President and Council become advocates for the Merchants . . . this seems to be calculated purely to amuse us and to lay asleep our so just complaints.' Despatch Book, 11 February 1732, vol. 105, para. 75, p. 442.

48 Weber, *The theory of social and economic organisation*, pp. 268-72.

49 Sunca Rama died in 1736. For references to his residence in Madras, see *Despatches from England 1717-1721 (Fort St. George)*, 17 October 1718, para. 25, p. 5; *Despatches to England 1736—1740 (Fort St. George)*, 29 January 1737, p. 37.

50 Despatch Book, 22 January 1692, vol. 92, p. 179; *Ibid.*, 10 April 1693, vol. 92, para. 19, p. 456.

51 On the Jagat Sheth's rise, see Abstract of Letters Received from Coast and Bay, 31 January 1722, vol. 2, para. 77, p. 321; Bengal Public Consultations, 2 June 1730, vol. 8 p. 234. On Omichund, see *ibid.*, 21 June 1731, vol. 8, p. 400; Abstract of Letters Received from Coast and Bay, 9 February 1734, vol. 3, pp. 361-3; *ibid.*, 11 December 1741, vol. 3, para. 60, p. 376.

52 The Memorie of Alexander Hume, 1730, Stadsarchief Antwerp, Generaal Indische Compagnie (The Ostend Company), 5769.

53 This kind of dealer-chain Hume describes as 'employing Delols *[dalals]* or piquaris *[pikars]* a sort of little Broker who goes from weaver to weaver to distribute the money and gather in the goods.' *Ibid.*

54 For a similar distinction between the rich and lesser merchants, see Factory Records Masulipatam, 26 August 1678, vol. 2, p. 80.

55 Bengal Public Consultations, 9 August 1731, vol. 8, p. 435.

56 *Ibid.*, 3 August 1732, vol. 9, pp. 188-9.

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58 On this point, see W. H. Moreland, *India at the death ofAkbar* (London, 1920), pp. 229-30.

59 Original Correspondence, 23 April 1687, vol. 47, No. 5578, p. 4.

60 *Ibid.*, 26 November 1669, vol. 30, No. 3373.

61 When the merchants began to leave the town, the *kazi* who had initiated the persecution went to the governor and asked him to stop them by force. But the latter replied that they were also the emperor's subjects and were free to travel where they pleased. *The English Factories in India 1668-166g*, p. 192.

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63 'A letter from Suratt in India giving an account of the manners of the English factors etc', 18 January 1672, in Barlow, R., and Yule, H., ed., *The diary of William Hedges 1681-1687* (3 vols., London, 1887-9), n> 3 12*

Chapter 8

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2 Uztariz, *The theory and practice of commerce*, 11, 15—17.

3 Gemelli Careri, *A voyage round the world*, bk 11, ch. iv, in Churchill, Awnsham, and Churchhill, John, ed., *A collection of voyages and travels* (4 vols., London, 1704), iv, 248.

4 P.R.O. East Indies, 1621, vol. 1, No. 88, K. N. Chaudhuri, *The English East India Company,]).* 120.

5 C. R. Boxer, *'Plata Es Sangre:* sidelights on the drain of Spanish-American silver in the Far East, 1550-1700', *Philippine Studies*, 18 (1970), 457-75.

6 W. W. Borah, *Early colonial trade and navigation between Mexico and Peru* (Berkeley and Los Angeles, 1954), pp. 116-27.

7 Uztariz, *The theory and practice of commerce,* 11, 86-7. *Travels of Fray Sebastien Manrique 1620-1643,* ed. C. E. Luard (2 vols., Oxford, 1927), 11, 49, quoted by Boxer, *'Plata Es Sangre',* p. 463.

8 The Elder Pliny, *The natural history,* ed. J. Bostock and H. T. Riley (6 vols., London, 1855-7), vol. 11, bk. vi, ch 26, p. 63.

9 R. C. Blitz, 'Mercantilist policies and the pattern of world trade, 1500-1750', *Journal of Economic History,* 27 (1967), 39-55.

10 K. N. Chaudhuri, 'Treasure and trade balances: the East India Company's export trade, 1660-1720', *Economic History Review,* 2nd series, 21 (1968), 480-502.

11 This statement must be qualified by the fact that in Europe by the middle of the seventeenth century a market in bonds had begun to emerge, though the contemporaneous opinion of stock-jobbing was an unfavourable one.

12 David Ricardo, *High price of bullion,* in Sraffa, P., ed., *Works of David Ricardo* (10 vols., Cambridge, 1951), 111, 57.

13 Supple, *Commercial crisis and change in England,* pp. 175-7.

14 Despatch Book, 3 November 1736, vol. 107, p. 81.

15 K. N. Ghaudhuri, *The English East India Company,* pp. 119-20; 'Treasure and trade balances: the East India Company's export trade', p. 484.

16 Thomas Prior, *Observations on coin in general with some proposals for regulating the value of coin in Ireland* (1729), printed in J. R. McCulloch, *A select collection of scarce and valuable tracts on money* (London, 1856), p. 302.

17 It may seem to those familiar with present-day conditions that to speak of long-term movements in Indian interest rates is an over simplification. Interest rates today widely vary in India according to different types of risks; but in our period the rates of commercial lending were highly standardised. For specific examples of the relationship between interest rates and the supply of loanable funds, see Factory Records Surat, 4 June 1662, vol. 2, p. 83; *ibid.,* 26 May 1670, vol. 3, p. 65; Factory Records Kasimbazar, 21 February 1678, vol. 1, p. 18; Factory Records Surat, 3 April 1719, vol. 10; *ibid.,* 20 September 1724, vol. 11, p. 20; Bengal Public Consultations, 8 May 1732, vol. 9, p. 83; Abstract of Letters Received from Coast and Bay, 3 January 1741, vol. 4, para. 182, p. 351; Factory Records Surat, 18 April 1748, vol. 32, p. 190.

18 Despatch Book, 5 July 1682, vol. 90, paras, 3-5, p. 2; Original Correspondence, 30 November 1683, vol. 43, No. 5001, para. 30, p. 12, para. 38, pp. 13-14.

19 In the absence of any estimate of total national income or output it is not possible to quantify the impact of silver imports on Indian economy during our period. From the qualitative evidence we get the impression that interregional and foreign trade was fairly important to the economy of the subcontinent.

20 Seep. 180.

21 Tavernier, *Travels in India,* 11, 93; Elliot and Dowson, *History of India,* vn, 138. For a recent discussion, see S. Chaudhuri, *Trade and commercial organisation in Bengal, 1650-1720* (Calcutta, 1975), p. 247.

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24 *Observations on coin in general,* printed in McCulloch, *A select collection,* p. 301.

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29 W. Howe, *The mining guild of new Spain and its tribunal general 1770—1821* (Cambridge, Mass., 1949), Appendix A, p. 454.

30 F. P. Braudel and F. G. Spooner, 'Prices in Europe from 1450 to 1750', in *The Cambridge Economic History of Europe,* iv, 459.
31 Michel Morineau, 'D'Amsterdam à Seville', *Annales,* 23 (1968), 178-98; D. A. Brading, 'Mexican silver-mining in the eighteenth century: the revival of Zacatecas', *Hispanic American Historical Review,* 50 (1970), 665-81; D. A. Brading and H. E. Cross, 'Colonial silver mining: Mexico and Peru', *ibid.,* 52 (1972), 545-79. P. J. Bakewell, *Silver mining and society in colonial Mexico: Zacatecas 1546—1700* (Cambridge, 1971).
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33 Horsefield, *British monetary experiments,* p. xii; S. Feavearyear, *The pound sterling: a history of English money,* 2nd edn (Oxford, 1963), p. 169.
34 Shaw, *Selected tracts and documents,* pp. 158, 190.
35 *Ibid.,* p. 214. E. J. Hamilton, *War and prices in Spain 1651—1800* (New York, 1947), p. 43. The reforms of Philip V in 1728 reduced the fineness of the silver reales struck in the Spanish Indies from the theoretical standard of 93.06 per cent to 91.67 per cent. The actual pieces coined at the mints of Mexico City did not, however, always conform even to the reduced fineness, and the deterioration of the Spanish currency was noticed by the Indian bankers. In 1741, for example, the leading banker of Bengal, Fatehchand, the Jagat Sheth, refused to pay more than the Mexico dollar rate for the new pillar pieces which used to sell for Rs 240 sicca weight. The Calcutta Council admitted that the new Spanish-American coins 'might be inferior to what the pillar dollars used to be some time ago and that about the year 1730 it was found in Europe that this Specie was greatly debased where coined'. See Factory Records Kasimbazar, 27 May and 17 June 1741, vol. 6, p. 43.
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37 *Court Minutes of the East India Company 1660—1663,* p. 62.
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49 *Ibid.,* 2 April 1683, vol. 90, p. 128.
50 See also Chapter 4, p. 63.
51 *Despatches from England 1681-1686 (Fort St. George),* 9 October 1683, pp. 78-9.
52 Despatch Book, 29 February 1692, vol. 92, para. 4, p. 208.
53 Court Book, 2 February 1694, vol. 40, p. 231.
54 Despatch Book, 13 September 1695, vol. 92, para. 22, p. 443.
55 See Horsefield, *British monetary experiments,* Appendix 1, Table C, for the price of gold and silver during 1694-6. The Company's records confirm these figures for silver, but the quotation of gold price given in the Ledger Book for 1697 seems unduly low at 82 s per oz. See Ledger Book J (L/AG/1/1/10), p. 135.
56 Court Book, 3 September 1695, vol. 41, p. 20.
57 Court Book, 11 June 1697, vol. 41, p. 182; *ibid.,* 9 July 1697, p. 184; *ibid.,* 27 October 1697, p. 207; *ibid.,* 26 August 1698, p. 307; *ibid.,* 24 May 1699, vol. 42, p. 5. For the exchange payments, see Commerce Journal, vol. 43 (L/AG/1/6/4), pp. 540-2, pp.

549-54, pp. 563-4; *ibid.*, vol. 46 (L/AG/1/6/5), PP-107-11, p. 163. See also the correspondence of the Company's Secretary with the bankers of Amsterdam, Home Miscellaneous Series, vol. 36, pp. 284-321.
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63 *Ibid.*, 15 February 1716, vol. 98, para. 7, p. 761.
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76 Factory Records Miscellaneous, 7 January 1667, vol. 3, p. 5.
77 Original Correspondence, 24 January 1680, vol. 40, No. 4691, para. 31, p. 7.
78 Factory Records Miscellaneous, 20 September 1670, vol. 2, p. 106; Factory Records Surat, 29 August 1672, vol. 3, p. 15.
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80 Tavernier, *Travels in India,* 1, 20.
81 Factory Records China: Canton Diary, 7 August 1730, vol. 30, p. 32. For Chinese weights and currency, see Morse, *East India Company in China,* 1, 68-9; Lien-sheng Yang, *Money and credit in China* (Cambridge, Mass., 1952).
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118 Factory Records Kasimbazar, 26 November 1679, vol. 1, p. 81; *The diaries of Master*, 11, 306-7.
119 For the variations in gold prices, see Factory Records Kasimbazar, 16 April 1680, vol. 1, p. 41; Factory Records Hugli, September 1684, vol. 10, p. 185.
120 Factory Records Surat, 10 November 1670, vol. 3, p. 108.
121 Factory Records Hugli, 16 November 1677, vol. 1. The interest rate in Bengal was 12 per cent as against 9 per cent in Surat.
122 Original Correspondence, 23 January 1682, vol. 41, No. 4794, para. 13, p. 5.
123 B.M. Additional MS. 34123, p. 42; Factory Records Hugli, 31 August 1683, vol. 9, p. 113.
124 Factory Records Kasimbazar, 7 September 1682, vol. 2, pp. 143-4.
125 'Observations made by the Committee of the Treasury touching the mint and treasure in the Bay', Despatch Book, 14 January 1686, vol. 91, pp. 48-50.
126 *Ibid.*, 7 April 1708, vol. 96, para. 73, p. 273.

127 *Ibid.*, 26 August 1685, vol. 90, p. 500. In 1687 Sir Josia Child confident of winning the war the Company was planning against the Mughal Empire, ordered the Madras Council to coin rupees in exact imitation of the Mughal ones, as James II had given permission to the Company to strike silver coins, saying 'we being not much concerned at this time whether the Mogol or his Governors be pleased or displeased at it', *ibid.*, 7 January 1687, vol. 91, pp. 245-6.
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134 *Ibid.*, 9 November 1721, vol. 4, p. 462.
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136 Despatch Book, 3 February 1720, vol. 100, para. 45, p. 229.
137 *Ibid.*, 14 February 1723, vol. 101, para. 57, pp. 467-8.
138 Bengal Public Consultations, 13 September 1731, vol. 8, pp. 451-2.
139 Factory Records Kasimbazar, 22 August 1737, vol. 5.
140 Despatch Book, 12 March 1731, vol. 105, para. 77, p. 243. On the coinage of Bombay, see Private Papers of Sir Robert Cowan, P.R.O. Belfast, Londonderry Estate, D/654/B 1/5 AA, India Office Records Microfilm Reel 2035.
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Chapter 9

1 *The Suma Oriental of Tomi Pires: an account of the East, from the Red Sea to Japan, written in Malacca and India in 1512—1515*, ed. Armando Cortẽsão (2 vols., London, 1944).
2 Hamilton, *A new account of the East Indies*, 1, 6. Hamilton was referring to Ovington's *A voyage to Surat* in particular and he was perhaps being less than fair to Ovington, as he himself included in his work places he had never seen, though he always made this clear.
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4 Bombay Public Proceedings, 10 September 1737, vol. 9, p. 262; Factory Records Surat, 11 August 1740, vol. 25, p. 4. See also the correspondence of Isaac Reynardson from Broach in 1673, in Factory Records Surat, vol. 106.
5 *Ibid.*, 4 June 1662, vol. 2, p. 83; Original Correspondence, 9 January 1675, vol. 35, No. 4062, p. 6.
6 Despatch Book, 16 February 1722, vol. 101, para. 23, p. 151.
7 Despatches to Bombay, 25 November 1759, vol. 996, para. 55, p. 709.
8 Pires, *Suma Oriental*, 11, 11: *The book ofDuarte Barbosa: an account of the countries bordering on the Indian Ocean, 1518*, ed. M. L. Dames (2 vols., London, 1918-21), 1, 46.
9 Carsten Niebuhr, *Travels through Arabia and other countries in the east*, tr. R. Heron (2 vols., Edinburgh, 1792), 1, 235.
10 *The itinerary of Ludovico di Varthema of Bologna from 1502 to 1508*, ed. Sir Richard Temple (London, 1928), p. 71.
11 Hamilton, *A new account of the East Indies*, 1,86.
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13 Pelsaert, *The Remonstrantie*, p. 39. On the economic effects of the Gujarat famine of 1630-1, see W. H. Moreland, *From Akbar to Aurangzeb* (London, 1923), pp. 210-17.
14 *The English Factories in India 1642-1645*, p. 142, p. 208; *The English Factories in India 1655-1660,$.* 301.
15 On the interruption to trade after the death of Maharaja Jaswant Singh of Jodhpur in 1678, see Original Correspondence, 17 February 1679, vol. 39, No. 4577, para. 20, p. 4.

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17 Abstract of Letters Received from Bombay, 15 May 1723, vol. 449, paras. 5-7, p. 503.
18 Letters Received from Bombay, 13 February 1727, vol. 460, para. 13, p. 101.
19 Despatch Book, 7 March 1729, vol. 104, para. 30, p. 459.
20 *Ibid.,* 7 June 1732, vol. 105, para. 31, p. 516.
21 Factory Records Surat, 11 January 1747, vol. 31, p. 50; *ibid.,* 24 February 1748, vol. 32, P- 139.
22 B.M. Additional MS. 34123, p. 98.
23 Factory Records Surat, 30 May, 1737, vol. 21; M. S. Commissariat, *A history of Gujarat 1573-1758* (Bombay, 1957), pp. 453, 465.
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25 Pires, *Suma Oriental,* 1, 42; Barbosa, *The book ofDuarte Barbosa,* 1, 146.
26 Pires, *Suma Oriental,* 1, 41.
27 See Kol. Arch. 1805, p. 81; Kol. Arch. 2094, p. 873.
28 Original Correspondence, 12 October 1674, vol 35, No. 4017, pp. 3-4; *ibid.,* 21 January 1679, vol. 39, No. 4563, para. 18, p. 4.
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32 Pires, *Suma Oriental,* 1, 88, 92.
33 *Ibid., n, 2J2.*
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35 S. Chaudhuri, *Trade and commercial organisation in Bengal,* pp. 86-96.
36 Archives Nationales, Paris, Mémoire Général du Commerce, 1733, C[2] 56.
37 Pires, *Suma Oriental,* 1, 45-6.
38 Roelofsz, *Asian trade and European influence,* p. 172.
39 See Bowrey, *Countries round the Bay of Bengal,* pp. 286-93.
40 Roelofsz, *Asian trade and European influence,* pp. 266-7. For an account of trade at Batavia, see also Original Correspondence, *c.* 1682, vol. 42, No. 4916.
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42 See Wang Gungwu, '"Public" and "Private" overseas trade in Chinese history', in Mollat, M., ed., *Sociétés et compagnies de commerce en Orient et dans VOcian Indien* (Paris, 1970).
43 Original Correspondence, 7 December 1672, vol. 33, No. 3708, pp. 25-6.
44 Buzurg ibn-Shahriyar, *Kitab 'Aja'ib al-Hind,* translation in G. F. Hourani, *Arab seafaring in the Indian Ocean in ancient and early medieval times* (Princeton, 1951), pp. 114-22.
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46 Tavernier, *Travels in India,* 1, 204—5.
47 Pires, *Suma Oriental,* 11, 269.
48 Tavernier, *Travels in India,* 1, 4.
49 B.M. Additional MS. 34123, p. 36, p. 39. Methwold, *Relations of Golconda,* p. 37.
50 *Ibid.*
51 Hourani, *Arab seafaring,* p. 96.
52 W. H. Moreland, 'The Ships of the Arabian Sea about A.D. 1500', *Journal of the Royal Asiatic Society,* 1 (1939), 65-74.
53 Methwold, *Relations of Golconda,* p. 36; Bowrey, *Countries round the Bay of Bengal,* p. 102.
54 R. A. Wadia, *The Bombay dockyard and the Wadia master builders* (Bombay, 1955), pp. 172-80.
55 For ships built in Pegu during the first half of the eighteenth century, see *Despatches to England 1711—1714 (Fort St. George),* p. 44; *Despatches to England 1724—172J (Fort St. George), p.* 78.
56 The Angrias mainly rose to power at the beginning of the eighteenth century and remained very formidable until their defeat at the hands of Clive and Admiral Watson in 1756.

57 For an account of a voyage in a modern *bum*, see A. Villiers, *Sons of Sindbad* (London, 1940).
58 See Kol. Arch. 2094, 2213.
59 Despatch Book, 19 November 1719, vol. 100, para. 19, p. 6.
60 Tavernier states that Indians and Persians possessed no navigational skills whatsoever. This is clearly an exaggeration, for Pires described Gujarati seamen as excellent navigators and pilots. See Tavernier, *Travels in India*, 1, 204, Pires, *Suma Oriental, 1*, 45.
61 For the nakhoda's power and authority on board an Arab *bum* in the 1930s, see Villiers, *Sons of Sindbad*.
62 Thomas Pitt began his career as the captain of an interloping ship trading in the Indies and he became the governor of Fort St George in 1698. For his diaries and letters, see B.M. Additional MS. 22842-8.
63 Captain Thomas Garland to Robert Cowan, 15 November 1730, Achin Road, Private Papers of Sir Robert Cowan, Londonderry Estate, India Office Records Microfilm Reel 2029, Document No. 62A.
64 Original Correspondence, 28 January 1664, vol. 28, No. 3019; *ibid.*, 22 September 1672, vol. 33, No. 3677.
65 Barbosa, *The book of Duarte Barbosa*, 1, 148; Original Correspondence, *c.* 1682, vol. 42, No. 4916.
66 Pires, *Suma Oriental*, 1, 13.
67 See Chapter 10, p. 226.
68 See B.M. Additional MS. 34123; Archives Nationales, Paris, Mémoire Général du Commerce, 1733, C^2 56; Kol. Arch. 1677, pp. 293-5.
69 The most important exception was of course raw cotton.
70 Niebuhr, *Travels through Arabia*, 1, 236; Niebuhr wrote about the trade of Jedda that 'large quantities of corn, rice, lentiles, sugar, oil, etc are imported from Egypt, without which this part of Arabia could not possibly be inhabited'.
71 'Goods imported at Mocha in the year 1721—2', Factory Records Egypt and Red Sea, vol. 1, No. 56, pp. 104-5, No. 93, pp. i73~4>No. 189,pp. 471-5.
72 Bombay Public Proceedings, 11 November 1717, vol. 4; Abstract of Letters Received from Bombay, 30 October 1718, vol. 449, para. 65, p. 304. Hamilton, *A new account of the East Indies*, 1, 159.
73 Original Correspondence, 16 January 1695, vol. 50, No. 5960; *Despatches to England i6g4~i6g6 (FortSt. George)*, 31 January 1696, para. 37, p. 41.
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75 *Despatches to England 1714-1718 (Fort St. George)*, 12 February 1715, para. 29, p. 47; Despatch Book, 5 October 1737, vol. 107, para. 22, p. 250.
76 See Methwold, *Relations ofGolconda*, p. 36.
77 Pires, *Suma Oriental*, 1, 20, 36.
78 Hamilton, *A new account of the East Indies*, 1, 63.
79 Original Correspondence, 4 April 1673, vol. 33, No. 3743, p. 6.
80 Despatch Book, 12 September 1660, vol. 85, p. 330.
81 The free merchants were required to obtain formal permission from the Company before settling in its settlements.
82 Court Book, 9 August 1732, vol. 62, p. 91.
83 Despatch Book, 9 February 1736-7, vol. 107, para. 53, pp. 191-2.
84 Original Correspondence, 3 February 1672, vol. 32, No. 3624, p. 2; *ibid.*, 22 September 1673, vol. 34, No. 3859, pp. 3-4; *ibid.*, 12 October 1674, vol. 35, No. 4017, pp. 3-4.
85 Despatch Book, 7 December 1669, vol. 87, p. 294; Original Correspondence, 29 December 1671, vol. 32, No. 3610, p. 3. *Ibid.*, 6 December 1675, vol. 36, No. 4143.
86 Despatch Book, 31 August 1661, vol. 86, p. 49; *ibid.*, 3 February 1662, vol. 86, p. 89.
87 *Ibid.*, 29 February 1676, vol. 88, p. 246.
88 Original Correspondence, 23 July - 6 August 1676, vol. 37, No. 4215, paras. 66-7, H3-4>PP- ''> 16-17.
89 See *ibid.*, 7 December 1661, vol. 27, No. 2905.
90 *Ibid.*, 7 April 1676, vol. 37, No. 4202, p. 3.
91 Despatch Book, 15 March 1678, vol. 88, p. 528; Original Correspondence, 21 January 1679, vol. 39, No. 4563, para. 18, pp. 4-5.
92 Despatch Book, 20 May 1681, vol. 89, para. 3, p. 346.

93 *Ibid.*, 10 February 1682, vol. 89, para. 55, p. 462.
94 Original Correspondence, 26 January 1683, vol. 42, No. 4905, para. 55, p. 9.
95 Despatch Book, 5 July 1682, vol. 90, para. 2, p. 2.
96 Original Correspondence, 23 February 1684, vol. 43, No. 5103, p. 1.
97 Despatch Book, 6 September 1682, vol. 90, paras. 7-8, p. 38; Original Correspondence, 23 February 1684, v°l- 43? No. 5103, p. 2; *ibid.*, 28 May 1684, vol. 44, No. 5156; Despatch Book, 2 July 1684, vol. 90, p. 340; *ibid.*, 3 October 1684, vol. 90, p. 380.
98 Bengal Public Consultations, 30 August 1712, vol. 2, p. 233; *ibid.*, 27 October 1712, vol. 2, p. 252.
99 *Ibid.*, 26 December 1712, vol. 2, p. 269.
100 Private Papers of Sir Robert Cowan, Londonderry Estate, India Office Records Microfilm Reel 2029, Document No. 37A.
101 Pitt to Cowan, 1 October 1730, *ibid.*, Microfilm Reel 2025, Document No. 59A.
102 Macrae to Cowan, 18 September 1724, *ibid.*, Microfilm Reel 2025, Document No. 6c.
103 India Office Records, Bombay Wills 1732-8, probate of will of Robert Cowan, 17 December 1737, Mayor's Court, Range 416, vol. 78, pp. 184-7.
104 Despatch Book, 11 February 1732, vol. 105, para. 79, pp. 443-4.

Chapter 10

1 Despatch Book, 19 November 1719, vol. 100, para. 25, p. 8.
2 *Journal of the House of Commons*, 30 April 1675, vol. 9, p. 327; *ibid.*, 15 November 1675, vol. 9, p. 376; Court Book, 21 May 1675, vol. 29, p. 247; *The Court Minutes of the East India Company 1674—1676*, pp. xx-xxi.
3 Despatch Book, 27 March 1661, vol. 86, p. 19; Original Correspondence, 7 December 1661, vol. 27, No. 2905.
4 Despatch Book, 24 March 1663, vol. 86, p. 249.
5 *Ibid.*, 4 April 1663, v°l- 86, p. 260; *ibid.*, 9 March 1664, vol. 86, p. 390.
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7 Original Correspondence, 30 November 1676, vol. 37, No. 4215, para. 11, p. 5.
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9 Despatch Book, 19 March, 1680, vol. 89, para. 8, p. 165.
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11 *Ibid.*, 18 June 1700, vol. 93, para. 13, p. 313.
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14 *Despatches from England 1702-1703 (Fort St. George)*, 9 March 1703, para. 8, p. 44.
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17 Despatch Book, 25 September 1691, vol. 92, p. 169.
18 *Ibid.*, 27 October 1693, vol. 92, p. 296.
19 *Ibid.*, 27 October 1714, vol. 98, para. 10, pp. 389-90.
20 *Ibid.*, 21 February 1718, vol. 99, para. 25, p. 401.
21 *Despatches from England 1734-1737 (Fort St. George)*, 31 January 1735, para. 10, p. 7.
22 Despatch Book, 3 January 1711, vol. 97, para. 37, p. 85; *Despatches from England 1734-1737 (FortSt. George)*, 9 February 1737, para. 9, p. 120.
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24 Despatch Book, 21 December 1664, vol. 86, p. 445.
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36 J. de L. Mann, *The cloth industry in the west of England from 1640-1880* (Oxford, 1971), p. 19.
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46 Original Correspondence, 5 June 1670, vol. 31, No. 3432, p. 4; *ibid.*, 20 November 1670, vol. 31, No. 3515, pp. 19-20.
47 *Ibid.*, 7 November 1671, vol. 32, No. 3594, p. 3.
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50 *Despatches to England 1711-1714 (Fort St. George)*, 14 October 1712, para. 45, p. 46.
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54 Despatch Book, 1 September 1697, vol. 92, para. 8, p. 608.
55 Original Correspondence, 11 March 1695, vol. 50, No. 5984.
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60 T. Hale, *A compleat body of husbandry*, 2nd edn (4 vols., London, 1758-9), m, 307.
61 R. W. Ferrier, 'The Armenians and the East India Company in Persia in the seventeenth and early eighteenth centuries', *Economic History Review*, 2nd series, 26 (1973), 38-62.
62 Despatch Book, 5 October 1737, vol. 107, para. 37, p. 224; Bombay Public Proceedings, 2 September 1740, vol. 11.
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64 *Ibid.*, 26 March 1753, vol. 16, para. 5, p. 3.
65 Abstract of Letters Received from Coast and Bay, 3 December 1715, vol. 2, para. 30, p. 26.
66 Despatch Book, 17 June 1748, vol. no, para. 14, p. 102.
67 *Ibid.*, 5 April 1715, vol. 98, para. 49, p. 577.
68 'Copy of an account delivered the 28th January 1740/41 from the Customs House to the Honourable House of Commons', Hardwick Papers, vol. 558, p. 148, B.M. Additional MS. 35906.
69 It was a major mistake on the part of the Indian factories to rely on a very narrow range

of selling outlets, which made it difficult for them to take the best advantage of such demand as there was for European commodities in India.

70 For metal exports the price variations were a much stronger guide to demand and were treated as such by the Company's officials. See *Despatches to England 1719-1727 {Fort St. George),* 13 October 1724, para. 38, p. 99; Abstract of Letters Received from Coast and Bay, 9 January 1725, vol. 2, para. 36, p. 436.

71 *Ibid.,* 16 October 1710, vol. 1, para. 19, p. 256; *ibid.,* 13 September 1716, vol. 2, para. 19, pp. 70-1.

72 Abstract of Letters Received from Bombay, 8 November 1723, vol. 449, para. 36, p. 509; Despatch Book, 25 April 1725, vol. 102, para. 30, p. 539.

73 The number of bales remaining unsold was also an indicator to the servants in Asia of how much they should indent for in the coming shipping season.

74 Despatch Book, 25 April 1725, vol. 102, para. 31, p. 539.

75 *Ibid.,* 24 March 1663, vol. 86, pp. 257-8.

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77 Despatch Book, 3 January 1694, vol. 92, para. 3, p. 329.

78 For the Company's comments on trade fluctuations, see Despatch Book, 19 March 1680, vol. 89, p. 165; Original Correspondence, 24 January 1681, vol. 40, No. 4716; Factory Records Surat, 24 February 1683, vol. 5, p. 28; Original Correspondence, 26 January 1683, vol. 42, No. 4905, para. 48, p. 8.

79 The Company allowed private traders to export coral under licence.

80 Despatch Book, 9 January 1710, vol. 96, para. 11, p. 678.

81 *Ibid.,* 5 January 1711, vol. 97, para. 16, p. 153.

82 *Ibid.,* 9 January 1710, vol. 96, para. 20, p. 650.

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84 *Ibid.,* 4 April 1712, vol. 97, p. 583.

85 *Ibid.,* 27 March, 1714, vol. 98, para. 35, p. 324.

86 *Ibid.,* 29 March 1717, vol. 99, para. 26, p. 217.

87 Abstract of Letters Received from Bombay, 11 October 1715, vol. 449, para. 46, p. 204.

88 *Ibid.,* 10 November 1713, vol. 449, para. 8, p. 186; *Ibid.,* 3 January 1715, vol. 449, para. 19, p. 197.

89 Despatch Book, 31 March 1716, vol. 98, paras. 22-3, p. 870.

90 Abstract of Letters Received from Coast and Bay, 9 October 1716, vol. 2, para. 37, p. 58.

91 *Despatches from England 1717-1721 (Fort St. George),* 17 October 1718, para. 28, p. 5.

92 Abstract of Letters Received from Bombay, 7 May 1713, vol. 449, para. 2, p. 184; Bombay Public Proceedings, 13 April 1721, vol. 5.

93 *Despatches to England 1711-1714 (FortSt. George),* 16 September 1713, para. 40, p. 133.

94 *Despatches from England 1713—1714 (Fort St. George),* 12 January 1714, para. 19, p. 81.

95 Abstract of Letters Received from Coast and Bay, 11 December 1714, vol. 1, para. 68, p. 530; Abstract of Letters Received from Bombay, 21 January 1717, vol. 449, para. 30, P- 250.

96 Despatch Book, 27 February 1719, vol. 99, para. 28, p. 673.

97 *Ibid.,* 5-11 March 1743, vol. 108, para. 27, p. 672; *ibid.,* 8 June 1743, vol. 109, para. 3, P-5-

98 *Ibid.,* 25 February 1748, vol. n o , para. 39, p. 49.

99 *Ibid.,* 14 March 1753, vol. 111, para. 34, pp. 575-6.

100 Despatches to Bombay, 19 December 1753, vol. 996, para. 15, p. 8.

101 For comments on the Bengal sales, see *Fort William-India House Correspondence, 1757-1759,* 25 March 1757, para. 51, p. 12; *ibid.,* 31 December 1758, para. 29, p. 333.

Chapter 11

1 Henry Pattullo, *An essay upon the cultivation of the lands and improvements of the revenues of Bengal* (London, 1772), p. 25.

2 *Considerations on the East India trade* (London, 1701), printed in McCulloch, *Early English tracts on commerce,* p. 549.

3 *Ibid.,* p. 552.

4 *Ibid.,* p. 550.
5 A. P. Wadsworth and J. de L. Mann, *The Cotton trade and industrial Lancashire 1600-1780.* (Manchester, 1931, reprinted 1965).
6 On this point, see David S. Landes, *The unbound Prometheus: technological change and industrial development in western Europe from 1750 to the present* (Cambridge, 1969), p. 83.
7 Robert Orme, *Historical fragments of the Mogul empire* (London, 1805), p. 409.
8 Orme was aware of the contradiction, but he glossed over the point by saying that the people of northern India wove hair or the coarsest kind of cloth.
9 See, for example, Methwold, *Relations ofGolconda,* p. 19.
I o *The diaries of Master,* 11, 9-15; Tavernier, *Travels in India,* 1, 46, 59.
I1 Report of John Taylor on Dacca raw cotton, 26 July 1792, Home Miscellaneous Series, vol. 456F, p. 115.
12 *The diaries of Master,* 11, 28.
13 Tavernier, *Travels in India,* 1, 46.
14 Despatch Book, 20 May 1696, vol. 92, para. 11, p. 486.
15 Methwold, *Relations ofGolconda,* p. 35.
16 The areas concerned, however, were not very large and more in the nature of metropolitan circles with the towns of Dacca and Masulipatam acting as the controlling centres.
17 G. C. M. Birdwood, *The industrial arts of India* (London, 1880), p. 224; Naqvi, *Urban centres and industries in Upper India,* p. 137.
18 Original Correspondence, 1669, vol. 16, No. 1669; *The English Factories in India 1637-1641,?.* 134.
19 The only modern historian to discuss the problem of distance and transport costs in relation to the cotton industry was W. H. Moreland. See *India at the death ofAkbar,* p. 183.
20 Methwold, *Relations ofGolconda,* p. 37; B.M. Additional MS. 34123, p. 43; Bengal Public Consultations, 26 December 1712, vol. 2, p. 269.
21 Despatch Book, 30 May 1690, vol. 92, p. 103.
22 Original Correspondence, 28 January 1664, vol. 28, No. 3019; *The English Factories in India 1661-1664,* p. 208.
23 Factory Records Fort St George, 22 July 1661, vol. 15, p. 77; Factory Records Java, 31 May 1665, vol. 4, p. 43.
24 R. E. Enthoven stated that many of the Gujarati *khatri* weavers migrated to Gujarat in the seventeenth century from Sind tempted by the strong European demand, see *The tribes and castes of Bombay* (3 vols., Bombay, 1920-3), 11, 206.
25 Adam Smith, *The Wealth of Nations,* vol. 1, bk 1, ch. in, p. 21; *ibid.,* vol. 11, bk iv, ch. ix, p. 201.
26 Despatch Book, 8 January 1718, vol. 99, para. 32, p. 271.
27 Factory Records Fort St George, 28 November 1661, vol. 14, p. 141; *The English Factories in India 1661—1664,* p. 65.
28 Despatch Book, 28 August 1682, vol. 90, p. 21; *ibid.,* 30 September 1684, vol. 90, para. 42, p. 368.
29 Naqvi, *Urban centres and industries in Upper India,* p. 138.
30 Original Correspondence, 28 January 1664, vol. 28, No. 3019; Factory Records Surat, 1 May 1673, vol. 3, p. 14; Original Correspondence, 30 November 1700, vol. 58, No. 7222, p. 11.
31 Fryer, *A new account of East India,* m, 159.
32 Bernier, *Travels in the Mogul empire,* pp. 281-2.
33 Tavernier, *Travels in India,* 1, 142; *The Diary and Consultation Book of 1740 (Fort St. George)* 14 February, p. 44, 3 December 1740, p. 208.
34 There are numerous references to Bengal's cheap water transport in the Company's records. See, for example, *Fort William—India House Correspondence 1748—1756,* 7 December 1754, p.813.
35 *Despatches from England 1730-1733 (Fort St. George),* 10 November 1732, para. 25, p. 77; *ibid.,* 6 February 1733, para. 3, p. 86.
36 Orme, *Historical fragments of the Mogul empire,* pp. 410-11; James Taylor, *A sketch of the topography and statistics of Dacca* (Calcutta, 1840), p. 173.
37 *Despatches to England 1733-1735 (Fort St. George),* 1 October 1733, para. 45, p. 7.
38 The promotors of the new town were Casava Chitty, Narrain and Chinna Tomby and

they were promised an advance of 2000 pagodas as the Company's contribution towards the cost of building houses, transplanting trees, laying out the streets, and supplying water and rice to the weavers. *The Diary and Consultation Book of 1737 [Fort St. George),* 12 September 1737, p. 139; *Despatches to England 1736-1740 (Fort St. George),* 29 January 1737, para. 73, p. 37.

39 In 1670, for example, the silk weavers of Ghaul were invited to come and settle in Bombay and the Council hoped to send home considerable quantities of cloth from the island itself. Original Correspondence, 30 March 1670, vol. 31, No. 3415.

40 Abstract of Letters Received from Bombay, 14 January 1712, vol. 449, para. 15, p. 166.

41 Factory Records Surat, 9 October 1725, vol. 11 A.

42 *Ibid.,* 24 November 1737, vol. 22, p. 55.

43 *The English Factories in India 1661—1664,* p. 65.

44 Robert Orme who devoted a great deal of space to the analysis of the effects of oriental despotism on India's crafts pointed out that it was much more difficult to coerce the weavers than other craftsman and that whole countryside would be deserted if the rulers tried to use too much force against the textile workers. Orme, *Historical fragments of the Mogul empire,* pp. 411-12.

45 *Despatches to England 1736-1740 (Fort St. George),* 13 January 1736, paras. 29-30, pp. 2-3.

46 *The Diary and Consultation Book of 1729 (Fort St. George),* 21 July 1729, p. 67; Bengal Public Consultations, 17 June 1729, vol. 8, p. 85. See also *Despatches from England 1717-1721 (FortSt. George),* 26 April 1721, para. 32, p. 98.

47 *The Diary and Consultation Book of 1731 (Fort St. George),* 11 August 1731, pp. 96-8.

48 *Despatches to England 1727-1733 (Fort St. George),* 19 January 1731, para. 30, p. 70. The famine affected the cloth merchants very severely and was commented upon by the Dutch as well. See Kol. Arch. 2190, 30 November 1734, pp. 1313-19; S. Arasaratnam, 'The Dutch East India Company and its Coromandel trade 1700-1740', *Bijdragen tot de Taal-j Land-en Volkenkunde,* **123** (1967), 325-46.

49 *Despatches to England 1727-1733 (Fort St. George),* 31 January 1732, para. 11, p. 92.

50 *Despatches to England 1741-1742 (Fort St. George),* 26 September 1741, para. 52, p. 10; *ibid.,* 4 February 1742, para. 22, p. 40.

51 Factory Records Kasimbazar, 7 June 1742, vol. 6.

52 Memorie of Jan Kersseboom, 14 February 1755, Lol. Arch. 2791, p. 92.

53 Bengal Public Consultations, 27 May 1745, vol. 17, p. 579.

54 See Naqvi, *Urban centres and industries in Upper India,* p. 138.

55 Factory Records Surat, 6 August 1673, vol. 106, p. 158.

56 Orme, *Historical fragments of the Mogul empire,* p. 411.

57 Factory Records Patna, 12 July 1620, vol. 1, p. 2; *The English Factories in India 1618-1621,* pp.192-3.

58 *Ibid.,* p. 204.

59 For a discussion of these points, see Chapter 7.

60 This particular view of the industrial craftsman has been expressed by Sir John Hicks who states that the primitive 'manufacturer' worked for the market and could not exist without buying and selling. He adds the qualification that this classification follows the modern view (of Menger and Pare to) and not that which Marx took from Adam Smith. See Sir John Hicks, *A theory of economic history* (Oxford, 1969), p. 29.

61 Adam Smith, *The Wealth of Nations,* vol. 1, bk 1, ch. m, p. 19; *ibid.,* vol. 11, bk iv, ch. ix, 200-1.

62 See also D. M. Amalsad, *Handloom weaving in the Madras Presidency* (Madras, 1925), p. 37.

63 Marx, *Capital,* vol. 111, pt iv, ch. xx.

64 For a sociological interpretation of the appropriation of labour services, see Weber, *The theory of social and economic organisation,* p. 233.

65 Marx, *Capital,* vol. m, pt iv, ch. xx.

66 Dobb, *Studies in the development of capitalism,* p. 138. Paul Mantoux, *The Industrial Revolution in the eighteenth century,* tr. M. Vernon, revised edn (London, 1961), p. 62.

67 Charles Hamilton, *The Hedaya or guide: a commentary on the Mussulman laws,* 2nd edn (London, 1870), pp. 299, 302, 308.

68 Original Correspondence, 30 November 1676, vol. 37, No. 4215, para. 17, p. n.

69 The system divided the financial risks equally between the producer and the distributor.

70 Factory Records Surat, 25 July 1670, vol. 3, p. 77.

71 *Ibid.*, [23] June 1673, vol. 106, pp. 125-6; *ibid.*, 11 October 1673, vol. 106, p. 177. In the latter letter the Broach factors said, 'He *[the broker]* confesses to have a considerable summe out in the weavers hands, but says that cannot gett it in without he be supplyed with more moneys to give them a little as they bring in their goods and soe to gett it in by degrees.'
72 *The Diary and Consultation Book of 1675 {Fort St. George),* 28 September 1675, p. 73.
73 Factory Records Java, 26 July 1622, vol. 3, p. 358.
74 *The Diary and Consultation Book of 1675 {Fort St. George),* 28 September 1675, p. 74.
75 *The Diary and Consultation Book of 1723 {Fort St. George),* 29 August 1723, pp. 91-2.
76 *Despatches to England 1736-1740 {FortSt. George),* 29 January 1737, para. 34, p. 28.
77 Factory Records Surat, 18 July 1673, vol. 106, pp. 147-8.
78 *Ibid.,* 17 June 1673, vol. 106, p. 124.
79 *Ibid.*, [23] June 1673, vol. 106, p. 126; *ibid.*, 2 July 1673, vol. 106, p. 128; *ibid.*, 24 September 1673, vol. 106, p. 175.
80 *Despatches to England 1719-1727 {Fort St. George),* 22 January 1726, para. 39, p. 124; *ibid.*, 22 September 1727, para. 66, p. 14; *Despatches to England 1736-1740 {Fort St. George),* 29 January 1737, para, 25, p. 27.
81 Despatch Book, 16 February 1670, vol. 87, p. 316.
82 Original Correspondence, 9 January 1671, vol. 31, No. 3538, p. 4.
83 Bombay Public Proceedings, 22 January 1725, vol. 6; Factory Records Surat, 10 February 1725, vol. 11, p. 73.
84 T. Raychaudhuri, *Jan Company in Coromandel 1605—1690* (The Hague, 1962), p. 145.
85 Despatch Book, 6 January 1738, vol. 107, para. 11, p. 383.
86 *Despatches to England 1736-1740 {Fort St. George),* 13 January 1736, para. 29, p. 2.
87 Despatch Book, 24 March 1722, vol. 101, para. 43, p. 236.
88 Factory Records Surat, 2 August 1731, vol. 15, p. 1; *ibid.*, 23 August 1731, vol. 15, p. 6; *ibid.*, 6 October 1738, vol. 23, p. 40; *ibid.*, 15 March 1755, vol. 40, p. 88.
89 The Bombay Council conceded most of the demands made by the weavers. Factory Records Surat, 14 January 1738, vol. 23, p. 6; *ibid.*, 22 February 1738, vol. 23, p. 33-
90 'Dacca cloth manufactures for exportation', Dacca 31 August 1776, *Ninth Report from the Select Committee 1783,* Appendix 51.
91 *Despatches from England 1734-1737 {Fort St. George),* 29 January 1736, para. 31, p. 63.
92 Factory Records Surat, 22 September 1739, vol. 24, p. 17.
93 Original Correspondence, 20 January 1664, vol. 28, No. 3019.
94 Bengal Public Consultations, 9 July 1711, vol. 2, p. 103.
95 *Despatches to England 1736-1740 {Fort St. George),* 29 January 1737, para. 20, p. 25.
96 *Despatches to England 1727-1733 {Fort St. George),* 25 August 1731, para. 34, p. 37; *Despatches to England 1733-1735 {Fort St. George),* 1 October 1733, para. 41, p. 7.
97 *Despatches to England 1733—1735 {Fort St. George),* 31 January 1734, para. 9, pp. 19-20; *ibid.*, 2 September 1734, para. 34, p. 42.
98 Home Miscellaneous Series, vol. 393, pp. 261-2.
99 The rise in the price of thread in the most expensive category of cloth (Cossaes French) was much less than in the case of coarser ones. One would expect this to happen because the lower grades would require a greater volume of raw cotton.
100 Despatch Book, 23 January 1736, vol. 106, para. 97, p. 614.
101 Factory Records Surat, 19, 26, 27 November 1747, vol. 32, pp. 76, 82, 89, 90-1; *ibid.*, 27 January 1748, vol. 32, p. 125.
102 Despatch Book, 24 March 1722, vol. 101, para. 43, p. 236.
103 Factory Records Surat, 20 September 1732, vol. 17, p. 32; *ibid.*, 17 November 1732, vol. 17, p. 61; *ibid.*, 14 September 1733, vol. 18, p. 20.
104 *Ibid.*, 30 December 1748, vol. 33, p. 74; *ibid.*, 27 August 1753, vol. 39, p. 15.
105 Home Miscellaneous Series, vol. 456F, pp. 145-7.
106 Despatch Book, 11 September 1689, vol. 92, p. 69. 'Captain Bowry' was of course Thomas Bowrey.
107 Factory Records Surat, 27 September 1742, vol. 27, p. 27; *ibid.*, 28-30 September, 2 October 1742, vol. 27, pp. 33-6.
108 *The Diary and Consultation Book of 1722 {Fort St. George),* 20 March 1722, p. 48.
109 *The Diary and Consultation Book of 1736 {Fort St. George),* 30 April 1736, pp. 77-9.

I1 o The Madras bleachers were traditionally ill-paid, though their services were considered absolutely essential to the Company's investments in southern India.
I11 *Despatches to England 1733—1735 (Fort St. George),* 31 January 1734, p. 20.
112 John Taylor, 'Account of the fine cotton, thread and fabrics produced in the Dacca Province', Home Miscellaneous Series, vol. 456F, pp. 115-27.
113 Report from the Board of Trade, Fort William, 16 November 1790, Home Miscellaneous Series, vol. 393, p. 479.
114 *The Diary and Consultation Book of 1731 (Fort St. George),* 16 August 1731, pp. 96—7.
115 Factory Records Surat, 2 July 1673, 12 August 1673, vol. 106, p. 128, p. 162; Original Correspondence, 14 October 1674, vol. 35, No. 4019; *ibid.,* 9 January 1675, vo^ 35? No. 4062.
116 Factory Records Surat, 30 November 1662, vol. 85, p. 423.
117 Home Miscellaneous Series, vol. 456F, p. 131.
118 *Despatches to England 1733-1735 (Fort St. George),* 31 January 1734, p. 20.
119 *Despatches to England 1743-1746 (Fort St. George),* 24 September 1745, para. 34, p. 78.
120 Despatch Book, 3 November 1736, vol. 107, p. 81.
121 Pelsaert, *The Remonstrantie,* p. 60.
122 John Irwin and P. R. Schwartz, *Studies in Indo-European textile history* (Ahmedabad, 1966), PP- 76-93-
123 Despatch Book, 3 December 1679, vol. 89, p. 130.
124 Abstract of Letters Received from Coast and Bay, 28 December 1720, vol. 2, paras. 65-6, p. 275.
125 J. Forbes Watson, *Textile manufactures and costumes oj the people oj India* (London, 1886).
126 John Taylor, 'Process of weaving plain and flowered muslins as practised by the weavers at Dacca', 13 September 1800, Home Miscellaneous Series, vol. 456F, pp. 223-85.

Chapter 12

1 *Journal of the House of Commons,* 14 February 1704, vol. 14, p. 336.
2 P.R.O. CO. 388/21, f. 250; John Irwin and Katharine B. Brett, *Origins of Chintz* (London, 1970), p. 5.
3 [Daniel Defoe], *Reflections on the prohibition Act: wherein the necessity, usefulness, and value of that law, are evinced and demonstrated* (London, 1708).
4 *Journal of the House of Commons,* 13 January 1704, vol. 14, p. 280. P. J. Thomas, *Mercantilism and East and India trade* (London, 1926), p. 119.
5 On the connection between economic depressions and social disorders in the seventeenth century, see Supple, *Commercial crisis and change,* pp. 229-30; for the silk weavers' riot, see William Foster, *The East India House* (London, 1924), pp. 68-9.
6 [Josia Child], *The great honour and advantage of the East India trade,* pp. 30-1.
7 *Considerations on the East India Trade,* in McCulloch, *Early English tracts on commerce,* p. 594.
8 Thomas Mun, *A discourse of trade from England unto the East Indies, 1621,* in McCulloch, *Early English tracts on commerce,* p. 9.
9 Mun in *ibid.*
10 On this point, see [Josia Child], *The great honour and advantage of the East India trade,* p. 28.
11 This point of view has been forcefully presented by Ralph Davis, 'The rise of protection in England, 1689-1786', *Economic History Review,* 2nd series, 19 (1966), 306-17.
12 Of course at the time when legislative action was being taken the Company complained of its possible consequences, but in quantitative terms it seems to have had little effect which probably explains why the complaints quickly died down.
13 The comparisons would be made between one year and the next as well as between different types of cloth. It is obvious that the most satisfactory state was one in which the nominator moved in a positive direction and the denominator in the negative.
14 Despatch Book, 14 August 1683, vol. 90, p. 210.
15 *Ibid.,* 23 March 1687, vol. 91, p. 275; *ibid.,* 3 October 1690, vol. 92, para. 23, p. 114; *ibid.,* 3 January 1694, vol. 92, para. 59, p. 307.
16 See K. N. Chaudhuri, *The English East India Company,* p. 195; Glamann, *Dutch Asiatic trade,* p. 133.
17 J. Cary, *A discourse concerning the East India trade* (London, 1699), p. 4.
18 Despatch Book, 20 May 1681, vol. 89, para. 8, p. 352.

19 *Ibid.,* 11 August 1664, vol. 86, p. 424.

20 *Ibid.,* 29 September 1673, v°l- 88, PP- 67-8; Original Correspondence, 17 January 1676, vol. 36, No. 4163, p. 26.

21 The actual quantities of textiles supplied was only 54 per cent of what had been ordered.

22 The mark-up in 1673 and 1675 were almost the same, 1.8 times the cost price, whereas in 1670 it was in the ratio of 1:3.

23 Despatch Book, 28 June 1676, vol. 88, p. 306; *ibid.,* 28 June 1676, vol. 88, p. 309.

24 *Despatches from England 1680—1682 (Fort St. George),* 5 January 1681, para. 43, p. 21.

25 *Ibid.,* 10 March 1682, para. 6, p. 76.

26 *Despatches from England 1681-1686 (Fort St. George),* 9 October 1682, p. 15.

27 Despatch Book, 28 August 1682, vol. 90, p. 21.

28 *Despatches from England 1681-1686(Fort St. George),* 9 October 1682, p. 15.

29 Despatch Book, 16 November 1683, vol. 90, para. 18, p. L. 4.

30 *Ibid.,* 26 October 1685, vol. 91, para. 18, p. 12; *ibid.,* 14 January 1686, vol. 91, para. 2, p. 32.

31 *Despatches from England 1681-1686 (Fort St. George),* 13 February 1685, p. 151.

32 Despatch Book, 6 December 1686, vol. 91, p. 232.

33 See Chapter 6.

34 Despatch Book, 3 February 1687, v°l- 9[1]? PP- 263-4.

35 It is of course natural that the cost of an expensive trade war should be justified later by claiming that the stock-building provided an opportunity to redress the Company's alleged grievances in India by force of arms.

36 For an explanation, see Despatch Book, 3 January 1694, vol. 92, para. 34, p. 303.

37 *Ibid.,* 15 February 1689, vol. 92, para. 14, p. 21; *ibid.,* 11 September 1689, vol. 92, p. 69; *ibid.,* 9 May 1690, vol. 92, p. 101.

38 The cost price of textiles for 1690 was unusually low. Apart from the unreliability of the value figures for these years referred to in Appendix 1, the cargo may have contained goods captured from the Indian shipping destined for the Red Sea, which were cheaper generally.

39 Despatch Book, 30 May 1690, vol. 92, p. 104; *ibid.,* 3 October 1690, vol. 92, para. 18, p. 113.

40 *Ibid.,* 20 December 1699, vol. 93, p. 259.

41 Despatch Book, 21 December 1664, vol. 86, p. 458. See also *ibid.,* 29 November 1670, vol. 87, p. 404.

42 Despatch Book, 16 February 1670, vol. 87, p. 333; *ibid.,* 29 November 1670, vol. 87, p.390.

43 Glamann, *Dutch Asiatic trade,* Table 26, p. 143.

44 Despatch Book, 13 March 1674, v°l« 88, p. 95.

45 *Ibid.,* 5 March, 1675, v°l- 88, p. 171, p. 186; *ibid.,* 25 August 1676, vol. 88, p. 326.

46 *Ibid.,* 8 March 1676, vol. 88, p. 264.

47 *Ibid.,* 7 September 1677, vol. 88, pp. 449-50; *ibid.,* 15 March 1678, vol. 88, p. 523; Original Correspondence, 21 January 1679, vol. 39, No. 4563, para. 5, p. 2.

48 *Despatches from England 1701-1706 (Fort St. George),* 6 March 1702, para. 14, p. 23; Despatch Book, 26 February 1703, vol. 95, para. 42, p. 58.

49 *Despatches from England 1701—1706 (Fort St. George),* 12 January 1705, para. 17, p. 66.

50 'Report on the state of trade 1697', House of Lords MSS., N.S. X, 1712-14, No. 3018, pp. 153-62.

51 Court of Committees, 24 May 1667, *Court Minutes of the East India Company 1664-1667,* p. 335; *ibid., 1668-1670,* pp. 141-2.

52 Thomas, *Mercantilism and the East India trade,* p. 66.

53 Foster, *The East India House,* p. 74.

54 Despatch Book, 18 June 1700, vol. 93, para. 10, p. 313.

55 *Ibid.*

56 *Ibid.,* 11 September 1689, vol. 92, p. 67.

57 *Ibid.,* 21 August 1700, vol. 93, para. 19, p. 338.

58 *Ibid.,* 12 January 1705, vol. 95, para. 15, p. 370. See also Ralph Davis, 'The rise of protection in England 1669—1786', *Economic History Review,* 2nd series, 19 (1966) 306-17.

59 Despatch Book, 12 January 1705, vol. 95, para. 5, p. 367.

60 *Ibid.*, 7 February 1707, vol. 96, para. 32, p. 81.
61 *Ibid.*, 9 April 1708, vol. 96, para. 46, p. 223; *ibid.*, 4 February 1709, vol. 96, para. 27, PP; 433-4-
62 *Ibid.*, 4 February 1709, vol. 96, para. 27, pp. 433-4.
63 *Ibid.*
64 7 Geo. I, *c.* 5. For a summary of the Act, see Thomas, *Mercantilism and the East India trade*, p. 160.
65 Scott, *Joint-stock companies*, 11, 204-5.
66 Despatch Book, 17 February 1727, vol. 103, para. 29, p. 504; *ibid.*, 4 December 1730, vol. 105, pp. 97-107.
67 *Ibid.*, 13 April 1726, vol. 103, para. 23, p. 263; *ibid.*, 5 April 1727, vol. 103, para. 20, p. 546; *ibid.*, 28 February 1728, vol. 104, p. 229; Letters Received from Bombay, 25 February 1726, vol. 460, para. 44.
68 *Ibid.*, 29 November 1723, vol. 102, para. 9, pp. 71-2; *ibid.*, 11 December 1727, vol. 104, para. 8, pp. 73-4.
69 *Ibid.*, 14 February 1728, vol. 104, para. 63, pp. 188-9; Abstract of Letters Received from Coast and Bay, 31 July 1728, vol. 3, paras. 3, 4, 13, pp. 24-5. The dismissal order came too late for Frankland, for he died on 23 August 1728, *ibid.*, 2 September 1728, vol. 3, para. 1, p. 26.
70 Despatch Book, 11 February 1732, vol. 105, para. 77, p. 443; Court Book, 9 August 1732, vol. 62, pp. 92-3; Robert Adams to Samuel Fazakerley, 14 January 1732, Home Miscellaneous Series, vol. 37, pp. 125-6.
71 Despatch Book, 4 December 1730, vol. 105, p. 105.
72 *Ibid.*, 12 March 1731, vol. 105, para. 35, p. 234; Bombay Public Consultations, 23 May 1731, vol. 5, p. 97.
73 Despatch Book, 29 November 1734, vol. 106, para. 18, p. 255; *ibid.*, 23 April 1735, vol. 106, para. 21, pp. 460-1.
74 *Ibid.*, 6 January 1738, vol. 107, para. 47, p. 391.
75 *Ibid.*, 24 December 1744, vol. 109, para. 14, p. 212; *ibid.*, 10 January 1746, vol. 109, para. 12, p. 361.
76 *Ibid.*, 25 February 1748, vol. no, para. 44, p. 49
77 *Ibid.*, 5 January 1711, vol. 97, para. 48, p. 133.
78 *Ibid.*, 14 February 17285 vol. 104, para. 63, pp. 188-9.
79 *Ibid.*, 23 January 1730, vol. 104, para. 20, p. 668.
80 *Ibid.*, 4 December 1730, vol. 105, p. 101.
81 *Ibid.*, 28 November 1729, vol. 104, p. 555; *ibid.*, 4 December 1730, vol. 105, p. 101.
82 *Ibid.*
83 *Ibid.*, n March 1736, vol. 106, para. 126, p. 660; *ibid.*, 6 February 1733, vol. 105, para. 23, p. 663; *ibid.*, 3 December 1731, vol. 105, p. 344.
84 *Ibid.*, 7 June 1732, vol. 105, para. 23, pp. 513-14.
85 In the Memoranda of the Committee of Correspondence, vol. 101, there is a table of prices paid for Surat goods from 1732 to 1737. From this the Committee could easily have calculated what was the rate of change.
86 Despatch Book, 14 February 1728, vol. 104, para. 81, p. 193.
87 *Ibid.*, 6 February 1733, vol. 105, para. 43, p. 669.
88 *Ibid.*, 23 January 1736, vol. 106, para. 54, p. 604.
89 *Ibid.*, 21 March 1740, vol. 108, para. 35, p. 143.
90 *Despatches from England 1721-1724 (Fort St. George)*, 2 February 1725, para. 21, p. 123.
91 Despatch Book, 27 January 1742, vol. 108, para. 76, p. 515.
92 *Ibid.*, 29 January 1734, vol. 106, para. 48, p. 185.
93 Despatch Book, 4 April 1712, vol. 97, para. 67, p. 532; *ibid.*, 27 March 1714, vol. 98, para. 57, p. 331; *ibid.*, 27 October 1714, vol. 98, para. 3, p. 388.
94 *Ibid.*, 15 February 1716, vol. 98, para. 13, p. 780.
95 It was definitely said that 'the demand from abroad is governed by their warehouses being full or empty', *ibid.* On the wreck of the *Addison* from Bengal, see *ibid.*, 21 December 1722, vol. 101, para. 17^.367.
96 Original Correspondence, 9 January 1671, vol. 31, No. 3538, p. 3.
97 Despatch Book, 27 October 1714, vol. 98, para. 3, p. 388.
98 *Ibid.*, 8 January 1718, vol. 99, para. 32, p. 371.

99 *Ibid.*, 6 January 1738, vol. 107, paras. 41-2, p. 371.
100 Factory Records Surat, 9 November 1672, vol. 3, p. 325.
101 Despatch Book, 15 February 1689, vol. 92, p. 25; *ibid.*, 18 February 1691, vol. 92, p. 148.
102 Despatch Book, 9 March 1664, vol. 86, p. 385; Original Correspondence, 22 January 1677, vol. 37, No. 4258.
103 *Ibid.*, 16 February 1722, vol. 101, para. 48, p. 160.
104 Abstract of Letters Received from Coast and Bay, 27 November 1716, vol. 2, para. 46, p. 80; Abstract of Letters Received from Bombay, 11 February 1710, vol. 449, paras. 20-2, p. 136; Bombay Public Proceedings, 15 May 1712, vol. 4; Bengal Public Consultations, 9 October 1727, vol. 6, p. 510.
105 The contracts were entered both in the Consultations and the account books. See Journals and Ledgers of Bombay, Madras, and Bengal, Range 419, 335, 174.
106 The three most important members to hold the position of the Company's broker in Calcutta were Janardan, Varanasidas, and Vishnudas Seth. In 1714 the Court protested that the power of the broker was such that even prominent merchants were afraid to approach the factory without his permission. Despatch Book, 13 January 1714, vol. 98, para. 41, p. 202. For a description of the Seth family, see C. R. Wilson, ed., *The early annals of the English in Bengal* (3 vols., London, 1895-1917), 1, 128.
107 Though there was no broker in Madras, there was a chief merchant.
108 Kol. Arch. 1132, 25 June 1663, p. 701. The best account of the origin of the joint-stock system in Madras is in S. Arasaratnam, 'Indian merchants and their trading methods *(c.* 1700)', *Indian Economic and Social History Review*, 3 (1966), 85-95.
109 The Company generally advanced 10 per cent of the total investment.
no Despatch Book, 20 September 1682, vol. 90, para. 18, p. 51; *ibid.*, 5 March 1684, v°l« 90, paras. 6-7, p. 260.
in Factory Records Hugh, vol. 10, p. 165, pp. 182-3, P- *95- I*1 l74& the leading Seth merchants refused to deal with the Company because four other members were admitted to the contract who were of a different caste. Bengal Public Consultations, 18 May 1748, vol. 21, p. 69.
112 The Memorie of Alexander Hume, 1730, Stadsarchief Antwerp, Generaal Indische Compagnie (The Ostend Company), p. 5769.
113 *The diaries of Master*, 30 August 1676,11, 303; Bengal Public Consultations, 23 April, 1744, vol. 17, p. 66.
114 The origin of the financial arrangement exemplified by the dadni is obscure.
115 The Memorie of Alexander Hume, 1730, Stadsarchief Antwerp, Generaal Indische Compagnie (The Ostend Company), 5769. Hume made a very careful list of merchants, stressing their character, financial capacity, and past record, by way of guiding his successor. It is likely that the English Company would have conducted a similar inquiry before entrusting any new merchant with a share of the investment.
116 See Bengal Public Consultations, 4 October 1725, vol. 6, p. 98.
117 See chapter 11, p. 253.
118 *Despatches to England 1714—1718 (Fort St. George)*, 3-7 January 1717, para. 30, p. 106; *ibid.*, 17 August 1717, para. 45, p. 115; *Despatches from England 171§-1718 (Fort St. George)*, 8 January 1718, para. 47, p. 108.
119 *The Diary and Consultation Book of 17ig (Fort St. George)*, 9 March 1719, p. 33; *Despatches to England 1719-1727 (Fort St. George)*, 26 January 1727, para. 87, p. 133.
120 *Despatches to England 1727-1733 (Fort St. George)*, 25 August 1731, para. 28, p. 86.
121 *Despatches from England 1717-1721 (Fort St. George)*, 26 April 1721, paras. 25-28, pp. 96–7.
122 *Despatches to England 1719-1727 (Fort St. George)*, 22 January 1726, paras. 39-40, p. 124; 'Relating to the method of providing callicoes on the coast of Choromandel and the nature of the settlements there: three papers relating to some affairs at Fort St. George', *c.* 1745-6, Memoranda of the Committee of Correspondence, vol. 102.
123 *Despatches to England 1736-1740 (Fort St. George)*, 29 January 1737, para. 25, p. 27.
124 *Despatches to England 1727—1733 (Fort St. George)*, 19 January 1730, para. 38, p. 71.
125 *Ibid.*, 31 January 1733, p. 122.
126 *Despatches to England 1733-1735 (FortSt. George)*, 2 September 1734, para. 36, pp. 42-3.
127 *Despatches to England 1736-1740 (Fort St. George)*, 13 January 1736, paras. 30, 69, pp. 3, 8.

128 *Despatches to England 1741-1742 (Fort St. George),* 4 February 1742, paras. 18, 22, pp.

129 *The Diary and Consultation Book of 1740 (Fort St. George),* 22 December 1740, p. 217; *Despatches to England 1243-1746 (Fort St. George),* 5 September 1744, para. 41, p. 20.
130 Ahmedabad was attacked many times by the Marathas in the early eighteenth century. The final siege began in August 1736 and ended in victory for the besiegers in May 1737. See Commissariat, *A history of Gujarat,* pp. 461-6.
131 Abstract of Letters Received from Bombay, 11 August 1724, vol. 450, para. 19, p. 10; Factory Records Surat, 8 November 1737, vol. 22, p. 47.
132 John Henry Grose, *A voyage to the East Indies* (London, 1757), pp. 103-3.
133 Despatch Book, 6-12 June 1746, vol. 109, paras. 33-9, p. 465.
134 Bengal Public Consultations, 19 March 1747, vol. 19, pp. 151-2; *Fort William-India House Correspondence 1748-1756,* 10 January 1748, para. 32, p. 191.
135 Memorie of Jan Kersseboom, 14 February 1755, Kol. Arch. 2791, p. 119.
136 *Ibid., p.* 94.
137 Bengal Public Consultations, 7 June 1753, vol. 26, pp. 164-5.
138 *Fort William-India House Correspondence 1748-1756,* 3 September 1753, paras. 25-56, pp. 678-91.
139 *Ibid.,* 31 January 1755, paras. 36-46, pp. 79-82.
140 The displacement of the Bengal merchants from the Company's trade removed the traditional safety valve between the Calcutta Council and the Murshidabad durbar.

Chapter 13

1 Glamann, *Dutch Asiatic trade,* Tables 1-2, pp. 13-14.
2 Dutch imports are not tabulated systematically by Glamann, but he estimates that the pepper imports for 1664 were 6.2 million Dutch pounds; according to figures given here, English imports for the same year were 1 167995 1b- Glamann, *ibid.,* p. 82.
3 Despatches to Bombay, 5 April 1754, vol. 996, p. 88.
4 For a discussion of the revival of the pepper trade through the Mediterranean and the Portuguese policies, see Braudel, *The Mediterranean and the Mediterranean world,* 1, 542-70.
5 For a summary of these views and an examination of the *Estado da India,* see Steensgaard, *Carracks, caravans, and Companies,* pp. 81-95; Vitorino Magalhães-Godinho, *Veconomie de Vempireportugais au XVe et XVIe siecles* (Paris, 1969).
6 Braudel, *The Mediterranean and the Mediterranean world,* 1, 546.
7 Steensgaard, *Carracks, caravans, and Companies,* p. 1 o 1.
8 Roelofsz, *Asian trade and European influence,* pp. 207-38.
9 K. N. Chaudhuri, *The English East India Company,* pp. 140-7.
10 D. K. Bassett, 'The Factory of the English East India Company at Bantam', pp. 226-7.
11 Factory Records Java, 28 March 1660, vol. 3, pt 3, p. 308.
12 Despatch Book, 22 August 1659, vol. 85, p. 241.
13 P. R. O. East Indies C. O. 77, 16 February 1663, vol. 9, No. 3; *The English Factories in India 1661-1664,* p. 218.
14 Factory Records Surat, 17 April 1663, vol. 103, p. 276; *ibid.,* 7 June 1664, vol. 104, p. 105.
15 Original Correspondence, 28 January 1664, vol. 28, No. 3019; *The English Factories in India 1661-1664,* p. 261.
16 'The Dutch East India Company at Amsterdam to the States General', 15 [25] August 1664, P. R. O. State Papers Holland, vol. 171, p. 145; *The Court Minutes of the East India Company 1664—1667,* pp. 66-7.
17 Sir George Downing to Sir Henry Bennet, 26 August (5 September) 1664, *ibid.,* p. 178.
18 For a later Dutch view of the historical situation on the Malabar coast, see 'Memorandum on the administration of the Malabar coast composed . . . by Julius Valentijn Stein van Gollenesse . . . in the year 1743', in Galletti, A., ed., *The Dutch in Malabar* (Madras, 1911), p. 51. See also Geneviève Bouchon, 'Les musulmans du Kerala à l'époque de la dècourverte portugaise', *Mare Luso-Indicum,* tome 2, 1972, pp. 3-58.
19 'Arguments for abating the price and custom of pepper', Despatch Book, 5 October 1677, vol. 88, p. 476.
20 *Ibid.,* 6 May 1685, vol. 90, para. 8, p. 469.
21 *Ibid.,* 16 November 1683, vol. 90, p. L. 6; *ibid.,* 3 September 1686, vol. 91, p. 173.

22 *Ibid.*, 22 October 1686, vol. 91, para. 91, p. 209.
23 *Ibid.*, 3 August 1687, vol. 91, p. 321.
24 *Ibid.*, 3 April 1708, vol. 96, para. 15, p. 328.
25 K. N. Chaudhuri, *The English East India Company*, p. 147.
26 For an early example in this period of pricing and sale of pepper see Court Book, 13 April 1660, vol. 24, pp. 255-6.
27 Original Correspondence, 14 November 1663, vol. 28, No. 3001; *The English Factories in India 1661-1664*, p. 202. The servants warned the Company on this occasion that no pepper would be procurable 'if you continue to tye us up to a price'.
28 Court Book, 23 October 1668, vol. 26, p. 322.
29 Court Book, 31 January 1666, vol. 25, p. 76; *ibid.*, 9 October 1678, vol. 31, p. 95.
30 *Ibid.*, 20 October 1665, vol. 25, p. 40.
31 *Ibid.*, 19 September 1666, vol. 25, p. 188.
32 Despatch Book, 1 July 1663, vol. 86, p. 277; see also *ibid.*, 29 February 1664, vol. 86, p. 368; Factory Records Java, 15 October 1668, vol. 4, pp. 12-13; Despatch Book, 25 February 1670, vol. 87, p. 344.
33 *Ibid.*, 4 October 1670, vol. 87, p. 375.
34 Glamann, *Dutch Asiatic trade*, p. 83.
35 Despatch Book, 23 October 1674, vol. 88, pp. 137-8.
36 *Ibid.*, 5 October 1677, vol. 88, pp. 475-6.
37 *Ibid.*, 16 February 1670, vol. 87, p. 315.
38 *Ibid.*, 22 February 1671, vol. 87, p. 424; *ibid.*, 15 March 1672, vol. 87, p. 529.
39 *Ibid.*, 9 February 1675, vol. 88, p. 162; *ibid.*, 6 November 1675, vol. 88, p. 198; *Ibid.*, 29 February 1676, vol. 88, p. 251; *ibid.*, 8 March 1676, vol. 88, p. 265.
40 *Ibid.*, 8 March 1676, vol. 88, p. 265; *Ibid.*, 28 June 1676, vol. 88, p. 312. For the accumulation of pepper stocks left unsold on the Company's hands, see *ibid.*, 6 November 1678, vol. 89, p. 1.
41 *Ibid.*, 19 July 1677, vol. 88, p. 438.
42 *Ibid.*, 1 May 1693, vol. 92, para. 5, p. 278; *ibid.*, 21 December 1722, vol. 101, para. 17, p. 367.
43 *Ibid.*, 7 April 1684, vol. 90, para. 20, p. 276.
44 *Ibid.*, 19 October 1683, vol. 90, p. 223: F. 6.
45 Glamann, *Dutch Asiatic trade*, p. 86.
46 Despatch Book, 22 March 1687, vol. 91, p. 277.
47 *Ibid.*, 7 January 1685, vol. 90, p. 421; *ibid.*, 7 January 1687, vol. 91, p. 240; *ibid.*, 11 January 1689, vol. 92, pp. 1-2; *ibid.*, 15 February 1689, vol. 92, p. 19.
48 *Ibid.*, 29 February 1696, vol. 92, p. 465.
49 *Ibid.*, 1 July 1696, vol. 92, para. 3, p. 484.
50 *Ibid.*, 10 March 1698, vol. 93, para. 19, p. 61.
51 *Ibid.*, 25 April 1700, vol. 93, para. 20, p. 282.
52 *Ibid.*, 12 January 1705, vol. 95, para. 33, p. 410. For a detailed calculation of the transport, customs, and other costs and the profitability of pepper, see *ibid.*, 3 July 1706, vol. 95, para. 46, p. 594.
53 *Ibid.*, 10 January 1711, vol. 97, para. 65, p. 176.
54 *Ibid.*, 24 December 1725, vol. 103, para. 17, pp. 332-3.
55 *Ibid.*, 2 January 1740, vol. 108, para. 33, p. 34.
56 *Ibid.*, 13 April 1726, vol. 103, para. 27, p. 263.
57 *Ibid.*, 29 March 1717, vol. 99, para. 32, pp. 218-19; *ibid.*, 25 April 1725, vol. 102, para. 56, P- 549-
58 For the dismissals of Robert Adams, the Chief of Tellicherry settlement, and Alexander Orme, the Chief of Anjengo, see *ibid.*, 13 April 1726, vol. 103, para. 27, p. 264; *Letters to Tellicherry 1726-1728*, 13 January 1728, p. 9; other Malabar matters are discussed in Despatch Book, 5 April 1727, vol. 103, paras. 23-4, pp. 546-8, para. 39, p. 553.
59 For references to competitive conditions in Malabar, see *Tellicherry Consultations 1727-1728*, 17 April 1727, vol. 3, p. 96; *Letters from Tellicherry 1733-1734*, 8 April 1734, p. 43; *Tellicherry Consultations 1741-1742*, 25 December 1741, vol. 13, pp. 60-1.
60 Despatch Book, 15 January 1714, vol. 98, para. 5, p. 233; *ibid.*, 27 March 1714, vol. 98, para. 51, p. 329; *ibid.*, 5 April 1715, vol. 98, para. 44, p. 576.
61 *Ibid.*, 27 March 1713, vol. 98, para. 38, p. 67.

62 *Ibid.*, 26 April 1721, vol. 100, para. 27, p. 603.
63 *Ibid.*, 23 April 1735, vol. 106, para. 23, p. 461; *ibid.*, 7 April 1738, vol. 106, para. 7, p. 425.
64 Despatches to Bombay, 5 April 1754, vol. 996, para. 75, p. 88; *Despatches from England 1754-1755 (FortSt. George)*, 27 November 1754, para. 27, p. 70.
65 *Despatches from England 1753-1754 (Fort St. George),* 15 February 1754, para. 95, p. 45.
66 Despatches to Bombay, 5 April 1754, vol. 996, para. 82, p. 92.
67 For an early example of this point, see Despatch Book, 17 August 1674, vol. 88, p. 127.
68 For supply conditions in South East Asia and Malabar, see Factory Records Java, 15 October 1668, vol. 4, p. 12; Original Correspondence, August 1670 [No date], vol. 31, No. 3467; Factory Records Surat, 11 January 1662, vol. 85, p. 275; Original Correspondence, 28 January 1664, vol. 28, No. 3019; Factory Records Surat, 23 July 1675, vol. 88, pt. 2, pp. 102-3.
69 Despatch Book, 5 December 1735, vol. 106, para. 14, p. 473.
70 Factory Records Java, 14 February 1665, vol. 5, pp. 4-5.
71 Factory Records Java, 30 January 1671, vol. 4, p. 74; Original Correspondence, 30 January 1671, vol. 31, No. 3550; Despatch Book, 21 September 1671, vol. 87, p. 473.
72 Original Correspondence, 22 January 1677, vol. 37, No. 4258, pp. 5-6.
73 On the harsh treatment of the Malay people in Sumatra by the Company's servants, see Despatch Book, 10 January 1711, vol. 97, para. 74, p. 179.

Chapter 14

1 Despatch Book, 23 December 1674, vol. 88, p. 149; *ibid.*, 4 August 1676, vol. 88, pp. 318-19.
2 *Ibid.*, 22 April 1681, vol. 89, p. 331.
3 *Ibid.*, 20 February 1706, vol. 95, para. 1, p. 500; *ibid.*, 1 December 1725, vol. 103, para. 35> PP- 74-5; *ibid.*, 23 January 1736, vol. 106, para. 4, p. 592.
4 Moreland, *From Akbar to Aurangzeb,* p. 52. For the Mediterranean imports, see Braudel, *The Mediterranean and the Mediterranean world,* 1, 562, 567.
5 Susan Fairlie, 'Dyestuffs in the eighteenth century', *Economic History Review,* 2nd series, *7 (1965), 488-510.
6 Jean Hellot, *The art of dying wool and woollen stuffs* (Dublin, 1767), pp. 37-8.
7 J. Beckmann, *History of inventions and discoveries,* tr. W.Johnston (1797), 2nd edn (4 vols., London, 1814), iv, 1 o 1.
8 Court Book, 24 October 1645, vol. 19, p. 353; Despatch Book, 16 February 1670, vol. 87, p.322.
9 *Ibid.*, 22 February 1671, vol. 87, p. 425; *ibid.*, 17 July 1671, vol. 87, p. 467.
10 *Ibid.*, 10 August 1663, vol. 86, pp. 292-3. *Mahmudi* was a local coin in Gujarat, which went out of circulation after the middle of the seventeenth century.
11 Despatch Book, 15 March 1672, vol. 87, p. 532; *ibid.*, 5 March 1675, vol. 88, p. 171; *ibid.*, 28 June 1676, vol. 88, p. 311; *ibid.*, 19 July 1677, vol. 88, p. 439; *ibid.*, 15 March 1681, vol. 89, p. 307.
12 *Ibid.*, 16 November 1683, vol. 90, p. L. 1; *ibid.*, 21 December 1683, vol. 90, p. 230; *ibid.*, 6 December 1686, vol. 91, p. 232; *ibid.*} 13 May 1687, vol. 91, para. 8, p. 299; *ibid.*, 3 August 1687, vol. 91, p. 333.
13 *Ibid.*, 25 September 1692, vol. 92, p. 168.
14 *Ibid.*, 18 February 1691, vol. 92, p. 129.
15 *Ibid.*, 13 September 1695, vol. 92, para. 21, p. 443.
16 Bombay Public Proceedings, 1 January 1713, vol. 4; Despatches to Bombay, 4 May 1757, vol. 996, para. 75, p. 493.
17 For exports to Persia, see Abstract of Letters Received from Bombay, 31 January 1713, vol. 1, para. 42, p. 177.
18 Despatch Book, 27 February 1719, vol. 99, para. 38, p. 677.
19 K. N. Chaudhuri, *The English East India Company,* p. 178.
20 Pelsaert, *The Remonstrantie,p.* 12.
21 *Ibid., p.* 15, n. 3.
22 Factory Records Surat, 20 November 1672, vol. 3, p. 31.
23 Original Correspondence, 16 December 1674, vol. 35, No. 4051, p. 2.
24 There are numerous references to such demands, see for example, 'Translate of a letter

from Zullphekeer Caun Bahadar *[£ulfikar Khan Bahadur]* to the Hon. Elihu Yale, 18 December 1690', *The Diary and Consultation Book of i6gi (Fort St. George),* p. 14; *Anjengo Consultations, 1J4J-1J49,* 13 August 1748, vol. 2A, p. 76.

25 Moreland, *From Akbar to Aurangzeb,* p. 118; K. N. Chaudhuri, *The English East India Company, p.* 190.

26 P. R. O. East Indies G. O. 77, 2 October 1660, vol. 8, No. 77; *The Court Minutes of the East India Company 1660-1663,* pp. 41-2, p. 178.

27 If the government did hint at such a construction of its offer, the reply of the Court of Committees was to hope that 'it is the interest of the kingdome, for as to their private concerne as merchants they must needs say that the worst of peace is better than the best warr, by which they cannot expect but to be present sufferers in one kinde or other'. *The Court Minutes of the East India Company 1664-1667,* 25 May 1664, p. 40.

28 *Ibid.*, 6 May 1664, p. 34; *ibid.,* 11 May 1664, p. 35; *ibid.,* 18 May 1664, p. 37; *ibid.,* 25 May 1664, p. 43.

29 Despatch Book, 28 January 1661, vol. 85, p. 364.

30 For a detailed account of English saltpetre trade, see S. Chaudhuri, *Trade and commercial organisation in Bengal,* pp. 160-71.

31 *Indian travels of Thevenot and Careri,* ed. S. Sen (New Delhi, 1949), p. 74; Raychaudhuri, *Jan Company in Coromandel,* pp. 168-70.

32 Despatch Book, 7 July 1673, vol. 88, p. 48.

33 *Ibid.,* 26 January 1698, vol. 93, p. 25.

34 For the movements of ships and the use of saltpetre as ballast, see *ibid.*, 26 February 1703, vol. 95, paras. 11-12, pp. 49-50.

35 *Ibid.,* 30 May 1712, vol. 97, para. 5, p. 610; *ibid.,* 13 January 1714, vol. 98, para. 52, p.205.

36 *Ibid.,* 2 February 1713, vol. 97, para. 89, p. 784.

37 *Ibid.,* 30 October 1717, vol. 99, para. 10, pp. 288-9.

38 *Ibid.,* 31 January 1735, vol. 106, para. 3, p. 405.

39 *Ibid.,* 21 March 1740, vol. 108, para. 37, p. 144.

40 *Ibid.,* 3 February 1741, vol. 108, para. 64, p. 360.

41 *Ibid.,* 14 October 1743, vol. 109, para. 8, p. 28; *ibid.,* 2 December 1748, vol. 110, para. 7, p.191.

42 *Fort William-India House Correspondence 1748—1756,* 29 November 1754, para. 14, p. 56.

43 Stadsarchief Antwerp, Generaal Indische Compagnie (The Ostend Company), 5769, p. 3.

44 Bengal Public Consultations, 9 November 1719, vol. 4, pp. 154-6.

45 *Ibid.,* 6 September 1728, vol. 6, p. 640.

46 Bengal Public Consultations, 7 April 1735, vol. 11, pp. 13-14; Despatch Book, 12 December 1735, vol. 106, para. 18, p. 521.

47 Bengal Public Consultations, 22 July 1736, vol. 11, pp. 254-5.

48 *Ibid.,* 24 April 1740, vol. 14, pp. 121-2.

49 Abstract of Letters Received from Coast and Bay, 8 January 1743, vol. 4, paras. 66-7, p. 420; *ibid.,* 30 January 1743, vol. 4, para. 5, p. 430.

50 Bengal Public Consultations, 25 July 1745, vol. 17, p. 636.

51 For a detailed account of the political nature of the saltpetre trade, see Memorie of Jan Kersseboom, 14 February 1755, Kol. Arch. pp. 30-41.

Chapter 15

1 Wadsworth and Mann, *The cotton trade and industrial Lancashire,* p. 106.

2 [Sir Josia Child], *The great honour and advantage of the East-India trade,* p. 32.

3 *Britannia Languens, or a discourse of trade: shewing the grounds and reasons of the increase and decay of land-rents, national wealth and strength* (1680), printed in McCulloch, *Early English tracts on commerce,* p. 421.

4 Glamann, *Dutch Asiatic trade,* p. 113.

5 Steensgaard, *Carracks, caravans, and Companies,* pp. 324-6; K. N. Chaudhuri, *The English East India Company,* p. 204.

6 *Ibid.,* pp. 53-4.

7 Despatch Book, 31 December 1662, vol. 86, p. 183.

8 Original Correspondence, 7 December 1672, vol. 33, No. 3708, pp. 10-11.
9 Morse, *East India Company in China,* 1, 40.
I o Wood, *A history of the Levant Company,* p. 103.
I1 *A treatise wherein is demonstrated that the East-India trade is the most national,* p. 13.
12 John Taylor, 'Process of weaving plain and flowered muslins as practised by the weavers at Dacca', 13 September 1800, Home Miscellaneous Series, vol. 456F, pp. 223-85.
13 Despatch Book, 29 November 1670, vol. 87, p. 404; *ibid.,* 16 December 1670, vol. 87, p. 410.
14 *Ibid.,* 4 December 1673, vol. 88, p. 81.
15 *Ibid.,* 19 March 1680, vol. 89, p. 188.
16 *Ibid.,* 16 July 1680, vol. 89, p. 220.
17 *Ibid.,* 5 January 1681, vol. 89, para. 38, p. 254; *ibid.,* 5 January 1681, vol. 89, p. 271; *ibid.,* 22 April 1681, vol. 89, pp. 330-1; *ibid.,* 22 July 1681, vol. 89, pp. 362-3.
18 *Ibid.,* 15 February 1689, vol. 92, para. 13, p. 20.
19 For the reaction of the Armenian traders to the suggestion of diverting the trade, see Original Correspondence, vol. 50, No. 5984. The passage is quoted in Chapter 3, p. 49.
20 Despatch Book, 24 May 1693, vol. 92, p. 293; *ibid.,* 27 October 1693, vol. 92, p. 297.
21 *Ibid.,* 26 August 1698, vol. 93, para. 11, p. 102.
22 *Ibid.,* 11 September 1689, vol. 92, p. 64.
23 *Ibid.,* 4 February 1709, vol. 96, para. 28, p. 471.
24 *Ibid.,* 5 January 1711, vol. 97, para. 56, p. 135.
25 *Ibid.,* 4 December 1730, vol. 105, p. 51.
26 Davis, *Aleppo and Devonshire Square,* pp. 136-7.
27 Despatch Book, 4 December 1730, vol. 105, p. 51.
28 'Direction for the making of such Raw China Silk as when organised or thrown here may serve the purposes of thrown silk imported from Italy[5], *ibid.,* 5 December 1733, vol. 106, p. 106.
29 *Ibid.*
30 For a detailed discussion of the various stages in winding and throwing raw silk, see D. C. Coleman, *Courtaulds: an economic and social history* (2 vols., Oxford, 1969), 1, 9-23.
31 *Fort William-India House Correspondence 1748—1756,* 3 February 1755, para. 11, p. 860.
32 Despatch Book, 5 December 1733, vol. 106, p. 108.
33 *Ibid.,* 4 December 1730, vol. 105, p. 49.
34 For changes in the rate of duty, see Henry Crouch, *A complete view of the British customs,* 3rd edn (London, 1738), and Henry Saxby, *The British customs* (London, 1757), p. 222.
35 For an account of Chinese trade in raw silk, see E-Tu Zen Sun, 'Sericulture and silk textile production in Ch'ing China', in Willmott, W. E., ed., *Economic organisation in Chinese society* (Stanford, 1972).
36 Factory Records China: Canton Diary, 1 September 1733, vol. 35, p. 47: *ibid.,* 30 July 1735^01.38, p. 22.
37 'Reasons humbly offered for reducing the duty on China silk', *c.* 1749, Memoranda of the Committee of Correspondence, vol. 102.
38 23 Geo. Ill, *c.* 34.
39 Despatch Book, 10 November 1732, vol. 105, p. 590; *ibid.,* 31 January 1735, vol. 106, para. 31, p. 411.
40 *Ibid.,* 31 January 1735, vol. 106, para. 25, p. 410.
41 *Ibid.,* 6 February 1733, vol. 105, para. 41, p. 668.
42 Factory Records China: Canton Diary, 15 September 1750, vol. 54, p. 13; *ibid.,* 29 September 1750, vol. 53, p. 58.
43 Tavern ier, *Travels in India,* 11, 2.
44 B.M. Additional MS. 34123, p. 42.
45 Bengal Public Consultations, 13 April 1730, vol. 8, p. 197; Abstract of Letters Received from Coast and Bay, 10 February 1731, vol. 3, para. 66, p. 133; Despatch Book, 11 February 1732, vol. 105, para. 55, p. 438.
46 Memorie of Jan Kersseboom, 14 February 1755, Kol. Arch. 2791, p. 110.
47 Bengal Public Consultations, 21 February 1726, vol. 6, p. 172; *ibid.,* 22 May 1729, vol. 8, P-75-
48 *Ibid.,* 28 October 1728, vol. 6, p. 668.
49 The Memorie of Alexander Hume, 1730, Stadsarchief Antwerp, Generaal Indische

Compagnie (The Ostend Company), 5769. It seems from a passage in the main report that the account on raw silk was written by the brother of Alexander Hume. See Indira Narang, 'The Ostend Company's records and the "Instructions" of Alexander Hume', *Indian Economic and Social History Review,* 2 (1967), 17-37.

50 Despatch Book, 29 November 1734, vol. 106, p. 289; see also the limits fixed in 1733, *ibid.,* 9 November 1733, vol. 106, p. 68.

51 Abstract of Letters Received from Coast and Bay, 26 December 1733, vol. 3, para. 39, p. 338; for the seventeenth century practice, see Matthew Vincent's report, 3 November 1676, *The diaries of Master,* n, 9-14.

52 Abstract of Letters Received from Coast and Bay, 26 December 1733, vol. 3, para. 38, p. 338.

53 Bengal Public Consultations, 21 February 1726, vol. 6, p. 172.

54 Abstract of Letters Received from Coast and Bay, 26 December 1733, vol. 3, para. 38, p. 338.

55 Bengal Public Consultations, 22 March 1731, vol. 8, p. 381.

56 Despatch Book, 23 January 1736, vol. 106, paras. 138-9, p. 621; Abstract of Letters Received from Coast and Bay, 15 February 1737, vol. 4, paras. 3-5, p. 210.

57 Bengal Public Consultations, 4 February 1740, vol. 14, p. 47.

58 Factory Records Kasimbazar, 6 January 1742, vol. 6.

59 *Ibid.,* 14 January 1742, vol. 6.

60 Memorie of Jan Kersseboom, 14 February 1755, Kol. Arch. 2791, p. 112.

Chapter 16

1 Factory Records Egypt and Red Sea, 22 August 1732, vol. 2, No. 301, p. 160. On this occasion the factors did succeed in obtaining some plants for Bombay, but they also stressed the hazards. La Roque denied the commonly held belief that the Arabs sought to prevent the spread of coffee cultivation and attributed it rather to merchants anxious to keep the Mokha trade to themselves. See Jean de La Roque, *A voyage to Arabia Foelix* (London, 1742), pp. 247, 249. [First published in French in Amsterdam in 1716.]

2 By the end of the eighteenth century most of the coffee drunk in Europe came from the West Indies and the use of Mokha coffee had declined considerably. See 'Extract of a letter from Dr. Fothergill to J. Ellis, agent for Dominica', 2 September 1772, in Ellis, J., *An historical account of coffee* (London, 1774), p. 29.

3 La Roque, 'An historical treatise concerning the original and progress of coffee as well in Asia as Europe', in La Roque, Jean de, *Voyage to Arabia. Prosper Alpini de Plantis Aegypti liber* (F. de Franciscis: Venetiis, 1592).

4 Philip Sylvester Dufour, *Traitez due cafe" du the" et du chocolate* (Lyon, 1685); Nicholas de Blegny, *Le bon usage due thè, du caffé et du chocolat pour la preservation et pour la guerison des maladies* (Paris, 1687); John Ray, *Universal history of plants* (London, 1686).

5 Roque, *A voyage to Arabia,* p. 292.

6 Despatch Book, 16 February 1670, vol. 87, p. 323.

7 *Ibid.,* 23 June 1671, vol. 87, pp. 461-2.

8 *Ibid.,* 17 August 1674, vol. 88, p. 127.

9 *Ibid.,* 3 October 1684, vol. 90, para. 27, p. 352; *ibid.,* 6 December 1686, vol. 91, p. 232.

10 *Ibid.,* 6 June 1694, vol. 92, para. 19, p. 373.

11 *Ibid.,* 1 July 1696, vol. 92, para. 17, p. 498; on the Red Sea piracies, see Ovington, *A voyage to Surat,* p. 270, Hamilton, *A new account of the East Indies,* 11, 34.

12 Glamann, *Dutch Asiatic trade,* p. 186. The price of coffee in the Dutch auction sales was low in 1699 and 1700, but from 1702 it was again on an upward course, *ibid.,* p. 285.

13 Despatch Book, 20 April 1708, vol. 96, para. 40, p. 354.

14 *Ibid.,* 5 October 1711, vol. 97, p. 320; *ibid.,* 4 April 1712, vol. 97, p. 542; *ibid.,* 17 October 1712, vol. 97, p. 633.

15 *Ibid.,* 5 April 1715, vol. 98, para. 49, p. 577; *ibid.,* 28 June 1717, vol. 99, para. 8, p. 247.

16 *Ibid.,* 19 November 1719, vol. 100, para. 15, p. 53.

17 'Sale of coffee received by the *Brittannia* 1736', Memoranda of the Committee of Correspondence, vol. 1 o 1.

18 Despatch Book, 10 November 1721, vol. 101, para. 6, pp. 2-3.

19 *Ibid.*, 17 October 1722, vol. 101, para. 5, p. 290.
20 Court Book, 31 May 1733, vol. 62, p. 351; *ibid.*, 7 June 1733, vol. 62, p. 353.
21 For one such example, see Despatch Book, 5 October 1711, vol. 97, p. 320. It was written to Bombay that the coffee 'sent by the *Abingdon* . . . was invoiced at £6 10s iod, a most unreasonable abuse considering that upon reviewing the old Company's invoices for above twenty years past received from Surat and Bombay we find what purchased at either place is invoiced from Rs 30 to Rs 41 per cwt\
22 Factory Records Egypt and Red Sea, 1 January 1726, vol. 1, paras. 25, 28, 37, pp. 481, 483.
23 *Ibid.*, 2 December 1728, vol. 2, No. 210, p. 3; Despatch Book, 12 March 1729, vol. 104, p. 481.
24 *Ibid.*, 5 December 1735, vol. 106, para. 16, p. 473; *ibid.*, 11 March 1736, vol. 106, para. 26, p. 639.
25 Factory Records Egypt and Red Sea, 10 June 1736, vol. 2, No. 346, p. 336; Despatch Book, 19 December 1739, vol. 108, para. 6, p. 12.
26 *Ibid.*, 5 October 1737, vol. 107, para. 30, p. 213; Factory Records Egypt and Red Sea, 29 July 1738, vol. 2, No. 377, p. 401.
27 Despatches to Bombay, 5 April 1754, vol. 996, para. 25, p. 45; *ibid.*, 31 March 1756, vol. 996, para. 16, p. 337.
28 The exception of course was indigo, but the West Indian competition virtually eliminated Indian imports in the first half of the eighteenth century. See Chapter 14.
29 Schumpeter, *English overseas trade*, Table xvi, pp. 52-5.
30 Original Correspondence, 7 December 1661, vol. 27, No. 2905.
31 *Ibid.*, 1 September 1670, vol. 31, No. 3470; *ibid.*, 20 November 1670. vol. 31, No. 3515, p. 6.
32 *Ibid.*, 10 January 1672, vol. 32, No. 3511, p. 10.
33 No precise figures are available in the seventeenth century of the volume of coffee imports in Surat, but the only year in which there was an approaching scarcity was in 1672 when the Company ordered 45000 maunds and it was calculated that there were only 4300 maunds in Surat. Factory Records Surat, 9 August 1672, vol. 3, p. n; *ibid.*, 16 September 1672, vol. 3, p. 16.
34 The seasonality was imposed by the timing of the voyages to the Red Sea rather than the timing of the harvest.
35 Original Correspondence, 20 November 1670, vol. 31, No. 3515, p. 16.
36 Factory Records Surat, 28 February 1663, vol. 2, p. 137; Despatch Book, 20 April 1708, vol. 96, para. 40, p. 354.
37 Original Correspondence, 12 January 1674, vol. 34, No. 3921, p. 13.
38 Factory Records Surat, 9 August 1672, vol. 3, p. n; *ibid.*, 16 September 1672, vol. 3, p. 16.
39 Despatch Book, 20 May 1681, vol. 89, paras. 9-10, p. 347.
40 *Ibid.*, 22 March 1723, vol. 101, para. 48, p. 523.
41 *Ibid.*, 12 March 1729, vol. 104, p. 481.
42 *Ibid.*, 5 April 1715, vol. 98, para. 50, p. 578.
43 Bombay Public Proceedings, 25 March 1713, vol. 4; Abstract of Letters Received from Bombay, 10 November 1713, vol. 449, p. 186. Bombay Public Proceedings, 16 February 1716, vol. 4.
44 Abstract of Letters Received from Bombay, 2 November 1715, vol. 449, para. 6, p. 213.
45 Factory Records Egypt and Red Sea, vol. 1, No. 207, p. 526.
46 Despatch Book, 21 October 1725, vol. 103, p. 11; Abstract of Letters Received from Bombay, 12 June 1726, vol. 450, para. 22, p. 162.
47 *Ibid.*, 16 August 1726, vol. 460, para. 9, p. 3.
48 Factory Records Egypt and Red Sea, vol. 2, No. 21 o, p. 3, No. 339, p. 317.
49 Niebuhr, *Travels through Arabia*, 11, 434.
50 Factory Records Egypt and Red Sea, 16 August 1719, vol. 1, No. 5, para. 3, p. 23.
51 Hamilton, *A new account of the East Indies*, I, 36; Factory Records Egypt and Red Sea, 17 August 1730, vol. 2, No. 244, p. 51.
52 *Ibid.*, 29 July 1729, vol. 2, No. 219, p. 22.
53 The connection between trade and revenue was well understood by Islamic rulers. For an example of Mamluk Egypt's attitude towards merchants and their treatment, see

Bernard Lewis, 'Egypt and Syria', in Holt, P. M., Lambton, Ann K. S., and Lewis, Bernard, ed., *The Cambridge History of Islam* (2 vols., Cambridge, 1970), 1, 224.
54 Factory Records Egypt and Red Sea, 20 July 1721, vol. 1, No. 29, p. 59.
55 *Ibid.*, vol. 1, p. 3, vol. 2, No. 211, p. 19.
56 Abstract of Letters Received from Bombay, 12 July 1724, vol. 450, para. 51, pp. 24-5.
57 Despatch Book, 30 October 1717, vol. 99, para. 6, p. 259.
58 *Ibid.*, 19 November 1719, vol. 100. para. 21, p. 54.
59 Factory Records Egypt and Red Sea, 20 July 1721, vol. 1, No. 29, paras. 37-9, pp. 59-60.
60 *Ibid.*, 19 August 1721, vol. 1, No. 43, p. 84; Abstract of Letters Received from Bombay, 19 August 1721, vol. 449, para. 8, p. 406.
61 Factory Records Egypt and Red Sea, 7 May 1725, vol. 1, No. 173, pp. 394-5.
62 *Ibid.*, 5 August 1725, vol. 1, No. 178, p. 426.
63 For the report of the *Barrington's* supercargoes, see *ibid.*, 17 August 1730, vol. 2, No. 244, p. 51; *ibid.*, 9 August 1731, vol. 2, No. 261, paras, 17, 26, pp. 81-2.
64 *Ibid.*, 23 December 1732, vol. 2, No. 309, para. 21, p. 172.
65 *Ibid.*, 23 May 1733, vol. 2, No. 319, p. 235.
66 *Ibid.*, 25 July 1736, vol. 2, No. 347, p. 338; Bombay Public Proceedings, 23 February 1737, vol. 9, pp. 43-4.
67 Eric Macro, *Bibliography on Yemen and notes on Mocha* (Coral Gables, Florida, i960), P-5i-
68 Niebuhr, *Travels through Arabia*, 1,433.
69 Hamilton, *A new account of the East Indies, 1,* 34-5.
70 For a discussion of this point, see Braudel, *The Mediterranean and the Mediterranean world, 1,* **187.**
71 Roque, *A voyage to Arabia*, p. 104.
72 Macro, *Notes on Mocha*, p. 31.
73 Niebuhr, *Travels through Arabia*, 1, 253.
74 Macro, *Notes on Mocha*, p. 31.
75 Factory Records Egypt and Red Sea, 20 July 1721, vol. 1, No. 29, para. 52, p. 63.
76 *Ibid.*, 4 August 1723, vol. 1, No. 85, p. 250; Abstract of Letters Received from Bombay, vol. 449, p. 539.
77 Niebuhr, *Travels through Arabia, 1,* 270.
78 Factory Records Egypt and Red Sea, 30 May 1732, vol. 2, No. 268, p. 93.
79 *Ibid.*, 15 August 1732, vol. 2, No. 299, para. 16, p. 149.
80 Roque, *A voyage to Arabia*, p. 102.
81 *Ibid.*, p. 238. See also C. van Arendonk, 'Kahwa', article in the *Encyclopaedia of Islam.*
82 'List of the places names where the coffee grows and their distance from Beetlefuckee', Factory Records Egypt and Red Sea, 20 July 1721, vol. 1, No. 19, p. 42, No. 29, p. 56.
83 The spelling in the original report is different from the modern version given here.
84 Factory Records Egypt and Red Sea, 29 June 1732, vol. 2, No. 272, p. 99.
85 Roque, *A voyage to Arabia*, p. 106.
86 *Ibid.*, p. 246.
87 Factory Records Egypt and Red Sea, 1 January 1726, vol. 1, No. 166, para. 27, p. 481.
88 *Ibid.*, 20 July 1721, vol. 1, No. 29, para. 23, p. 56.
89 *Ibid.*, 11 August 1724, vol. 1, No. 156, p. 370; Despatch Book, 19 November **1719,** vol. 100, para. i7,PP-53-4-
90 Factory Records Egypt and Red Sea, 20 July 1721, vol. 1, No. 29, para. 23, p. 56; *ibid.* 9 August 1731, vol. 2, No. 261, para. 7, p. 79.
91 See *ibid.*, vol. 1, No. 123, p. 280; No. 151, p. 353; No. 181, p. 444; No. 201, p. 518;, vol. 2, No. 261, p. 79-80; No. 301, p. 157; No. 327, p. 254; No. 333, p. 297; No. 340, p. 320.
92 *Ibid.*, 15 August 1732, vol. 2, No. 299, para. 16, p. 149.
93 *Ibid.*, 15 March 1724, vol. 1, No. 132, pp. 298-9; *ibid.*, 22 August 1732, vol. 2, No. 301, pp. 157-8.
94 *Ibid.*, July 1735, vol. 2, No. 342, p. 324; No. 348, p. 342; No. 356, p. 361; No. 372, p. 389.
95 *Ibid.*, 3 April 1734, vol. 2, No. 332, p. 280; *ibid.*, 1 May 1738, vol. 2, No. 362, p. 373.
96 *Ibid.*, 26 January 1724, vol. 1, No. 129, para. 6, p. 289.
97 *Ibid.*, 11 August 1722, vol. 1, No. 96, para. 15, p. 167; Abstract of Letters Received from Bombay, 6 August 1725, vol. 450, para. 64, p. 440.

98 Roque, *A voyage to Abrabia,* p. 241.
99 Despatch Book, 19 November 1719, vol. 100, para. 17, pp. 53-4.
100 Factory Records Egypt and Red Sea, 4 July 1733, vol. 2, No. 324, para. 8, p. 253.
101 *Ibid.,* 10 July 1733, vol. 2, No. 327, p. 261.
102 *Ibid.,* 21 June 1738, vol. 2, No. 367, p. 382.

Chapter 17

1 *Considerations on the duties upon tea, and the hardships suffered by the dealers in that commodity* (London, 1744).
2 Malachy Postlethwayt, *The universal dictionary of trade and commerce* (2 vols., London, 1751), 11, 738-9, s.v. 'smuggling'. See also P.R.O. Chatham Papers, 1784, 30/8/293, and Hoh-Cheung Mui and Lorna H. Mui, 'Trends in eighteenth century smuggling reconsidered', *Economic History Review,* 2nd series, 28 (1975), 28-43.
3 Despatch Book, 13 February 1685, vol. 90, p. 266.
4 *Ibid.,* 12 August 1681, vol. 89, para. 10, p. 367.
5 *Ibid.,* 3 September 1686, vol. 91, p. 174.
6 *Ibid.,* 22 October 1686, vol. 91, paras. 2-6, pp. 206-8.
7 *Ibid.*
8 In 1711 the Madras Council requested the Company not to send any ships to the coast of Coromandel when these were on their way back from China, because this would, the Council feared, ruin its own private trade and bring little gain to the Company. *Despatches to England 1711-1714 (Fort St. George),* 20 August 1711, para. 176, p. 13.
9 Despatch Book, 3 October 1690, vol. 92, para. 16, p. 112.
10 *Ibid.,* 3 October 1690, vol. 92, p. 117.
11 Commerce Journal, vol. 43 (L/AG/1/6/4), 15 November 1697, p. 130, 31 December 1697, p. 145.
12 Despatch Book, 16 October 1704, vol. 95, p. 326.
13 Court Book, 11 October 171 o, vol. 51, p. 160.
14 Despatch Book, 13 December 171 o, vol. 97, p. 31.
15 The most authoritative discussion of the statistics on tea sales and prices in the eighteenth century is in Mui and Mui, 'Trends in eighteenth century smuggling'.
16 *Despatches from England iy13-1714 (Fort St. George),* 27 October 1714, para. 5, p. 63.
17 Despatch Book, 3 March 1732, vol. 105, para. 13, p. 472.
18 *Ibid.,* 29 November 1728, vol. 104, p. 299.
19 Despatch Book, 4 December 1730, vol. 105, para. 68, p. 45; Glamann, *Dutch Asiatic trade,* pp. 226-7.
20 Factory Records China: Canton Diary, 6 July 1729, vol. 29, pp. 21-2.
21 For an account of Thomas Hall's business career, see Conrad Gill, *Merchants and mariners of the 18th century* (London, 1961).
22 P.R.O. C. 103/132, bundle 284, Jacob Senserf & Son to Thomas Hall, 16 February (New Style) 1731.
23 *Ibid.,* Jacob Senserf & Son to Thomas Hall, 7 August (New Style) 1731.
24 *Ibid.,* Diederick Smith to Thomas Hall, 28 April (New Style) 1739.
25 In the above letter, Smith was justifying the bad results of some tea sales that he had made on behalf of Hall, and he added, 'sometime ago Mr. Pels sold all his teas; this week Mr. Deneufville sells all his baskets and chests . . . Do you imagine Sir that these Gentlemen who are in no want of money and have fifty brokers at their beck, would determine to put their goods up at publick sale, if they could possibly sell them out of hands or entertain the least expectation of trade turning.'
26 P.R.O. C. 103/132, Robert Hewer to Thomas Hall, 20 October (New Style) 1733.
27 Court Book, 9 August 1732, vol. 62, p. 93.
28 Miscellaneous Letters Received, 20 January 1721, vol. 12, No. 42.
29 *Ibid.,* 6 September 1721, vol. 12, Nos. 210-11.
30 Court Book, 23 June 1721, vol. 56, p. 391.
31 *The Reports with appendix3 from the committee of the House of Commons appointed to enquire into the frauds and abuses in the customs.* 1733.
32 Letter from J. Pownall, 26 January 1783, P.R.O. 30/8/293, p. 3.
33 *Reports of the House of Commons,* 1st series, vol. 11, 1783, p. 230.

34 Crouch, *A complete view of the British customs.*
35 Mui and Mui, 'Trends in eighteenth century smuggling', p. 29.
36 i8Geo. Ill, c. 26, s. 6.
37 Mui and Mui, 'Trends in eighteenth century smuggling', p. 35.
38 Court Book, 19 December 1733, vol. 62, p. 522.
39 For a list of the contemporaneous pamphlets published in 1733 on the Excise Bill, see L. W. Hanson, *Contemporary printed sources for British and Irish economic history 1701-1750* (Cambridge, 1963), pp. 486-91.
40 [Sir Matthew Decker], *Serious considerations on the several high duties which the nation in general. . . labours under* (London, 1743).
41 *Journal of the House of Commons,* 24 March 1745-6, vol. 24, p. 104.
42 P.R.O. Chatham Papers, 1 July 1784, 30/8/293, pp. 35-6.
43 Mui and Mui, 'Trends in eighteenth century smuggling', pp. 29-31.
44 P.R.O. Chatham Papers, 30 June 1784, 30/8/293, p. 19.
45 Since the Company always fixed the output and let the demand conditions determine the prices, it would gradually move towards the point at which marginal revenue equalled marginal cost, the point of maximum profit.
46 P.R.O. Chatham Papers, 29 June 1784, 30/8/293, p. 31.
47 For total sales and re-exports, see Mui and Mui, 'Trends in eighteenth century smuggling', Table 1, p. 37. The reliability of some of the statistics in this table is questionable, but the shortcomings are fully discussed by the authors.
48 Despatch Book, 16 October 1704, vol. 95, p. 326.
49 Ovington, *A voyage to Surat.*
50 Robert Fortune, *Three years[3] wanderings in the northern provinces of China* (London, 1847), p. 222.
51 The black and green teas were both processed in the same way, but the black variety was dried over a fire and in the sun for a longer time than the green.
52 Factory Records China: Canton Diary, 21 May 1723, vol. 21, pp. 14-15; *ibid,*, 26 February 1732, vol. 32, p. 4.
53 *Ibid.*, 23 February 1732, vol. 32, p. 2.
54 *Ibid.*, 5-6 August 1724, vol. 25, p. 6.
55 *Ibid.*, 4 November 1729, vol. 29, p. 42.
56 Morse, *East India Company in China,* 1, 163.
57 Despatch Book, 13 December 1710, vol. 97, para. 11, pp. 19-20.
58 Miscellaneous Letters Received, 20 November 1710, vol. 2, No. 117, p. 214. For the Company's view of Linqua and Anqua, see Despatch Book, 7 December 1716, vol. 99, para. 24, p. 48.
59 Despatch Book, 4 December 1717, vol. 99, para. 12, p. 300.
60 Factory Records China: Canton Diary, 24 May 1731, vol. 31.
61 Morse, *East India Company in China,* 1, 248-52.
62 Factory Records: Canton Diary, 24 May 1731, vol. 31.
63 *Ibid.*, 14 October 1724, vol. 25, pp. 11-12.
64 *Ibid.*, 1 November 1722, vol. 23, p. 39.
65 *Ibid.*
66 *Ibid.*, 23 June 1726, vol. 26, p. 9.
67 Morse, *East India Company in China,* 1, 75.
68 *Ibid.*
69 Reports of the Committee of Correspondence, 23 September 1757, vol. 22.
70 The main question on the tea sales was that of the allowance on packing, or the tare, to be given to the buyers. The Company allowed anything from 8 to 15 per cent of the gross weight of a tea chest as tare. In 1731 one of the points made by the warehouse officials was that tea chests should not contain too many metal canisters, which made it difficult to show samples to the buyers. Despatch Book, 26 October 1731, vol. 105, p. 389.
71 *Ibid.*, 10 December 1716, vol. 99, p. 54.
72 *Ibid.*, 17 November 1725, vol. 103, pp. 131-2; *ibid.*, 1 November 1726, vol. 103, p. 507.
73 *Ibid.*, 2 January 1740, vol. 108, p. 55.
74 Factory Records China: Canton Diary, 28-9 May 1723, vol. 22; *ibid.*, 30 June 1724, vol. 25, p. 5.

75 *Ibid.*, 20 July 1730, vol. 30, p. 18. For the reference to Ton Honqua's letter, see Despatch Book, 10 December 1731, vol. 105, pp. 387-8.
76 Factory Records China: Canton Diary, 1 November 1722, vol. 21.
77 For an estimate of European shipping arriving in Canton, see Dermigny, *Le commerce à Canton,* 11, 520-35.
78 Factory Records China: Canton Diary, 18 January 1723, vol. 23, p. 57.
79 See Chapter 16, p. 382.
80 Factory Records China: Canton Diary, 23 June 1726, vol. 26, p. 9.
81 *Ibid.*, 28 July 1721, vol. 22, pp. 5-6.
82 *Ibid.*, 9 August 1722, vol. 23, p. 9.
83 *Ibid.*, 11 November 1735, vol. 38, p. 87.
84 *Ibid.*, 23 June 1726, vol. 26, p. 9.
85 *Ibid.*, 7 December 1729, vol. 29, pp. 55-6.
86 *Ibid.*, 3 August 1734, vol. 36, p. 42.
87 *Ibid.*, 8 December 1750, vol. 54, p. 43.
88 *Ibid.*, 4 November 1729, vol. 29, pp. 42-3.
89 *Ibid.*, 24 July 1732, vol. 33, pp. 51-2.
90 Lockyer advised all contracts to be concluded in writing because 'tho they may be rogues enough in their hearts, they don't care to appear so in writing', *An account of the trade in India.*
91 Despatch Book, 16 October 1704, vol. 95, p. 326.
92 Factory Records China: Canton Diary, 19 October 1734, vol. 36, p. no, 21 October 1734, p.112.
93 D. F. Lunsingh Scheurleer, *Chinese export porcelain: Chine de commande* (London, 1974), p. 74; P. J. Donnelly, *Blanc de Chine, the porcelain of Tehua in Fukien* (London, 1969), p. 242.
94 T. Volker, *Porcelain and the Dutch East India Company 1602-1682* (Leyden, 1954), p. 37.
95 The sales prices and the lists of quantities offered are recorded in the Court Books of the English Company up to 1705.
96 Despatch Book, 19 December 1712, vol. 97^.671.
97 Scheurleer, *Chinese export of porcelain,* p. 165. Thomas Pitt, the governor of Madras, had a dinner set made for him in Imari style with his coat of arms. R. Soame Jenyns, *Japanese porcelain* (London, 1965), p. 42.
98 Despatch Book, 1 November 1726, vol. 103, p. 508.
99 S. W. Bushell, *Description of Chinese pottery and porcelain being a translation of the T'ao Shuo by Chu Ten* (Oxford, 1910).
100 Factory Records China: Canton Diary, 4 September 1721, vol. 22, p. 13.
101 *Ibid.*, 10 August 1734, vol. 36, p. 48.
102 *Ibid.*, 24 September 1750, vol. 54, p. 17.

Chapter 18

1 P. G. M. Dickson, *The financial revolution in England: a study in the development of public credit 1688-1756* (London, 1967), Table 1, p. 10.
2 For a lucid discussion of these points, see Richard Grassby, 'The rate of profit in seventeenth-century England', *English Historical Review,* 84 (1969), 721-51.
3 Cobbet's *Parliamentary history of England*, vol. 10, p. 109, quoted by A. H. John, 'Insurance investment and the London money market of the 18th century', *Economica,* 20 (1953), 137-58. See also Dickson, *The financial revolution,* pp. 407-8.
4 Josia Child, *A new discourse of trade,* ch. 1, p. 22.
5 Grassby, 'The rate of profit', p. 748.
6 The views of Max Weber and W. Sombart on this point have been summarised by B. S. Yamey, 'Scientific bookkeeping and the rise of capitalism', *Economic History Review,* 2nd series, 1 (1949), 99-113.
7 Grassby, 'The rate of profit', p. 748.
8 'Report to the House from their committee touching the Old East India Company, 1698', Bodleian Library, Oxford, Rawlinson MSS. A. 302, p. 230. See also Scott, *Joint-stock companies,* 11, 164.
9 Despatch Book, 24 December 1664, vol. 86, p. 442; *ibid.*, 13 March 1674, vol. 88, p. 100.
10 Factory Records Surat, 28 July 1673, vol. 3, p. 23.

11 Bodleian Library, Rawlinson MSS. A. 302, p. 230.
12 Scott, *Joint-stock companies,* 11, 129-30.
13 The preambles of 1657 and 1661 laid down that £500 worth of stock was the minimum necessary for a vote. But as only 50 per cent of the capital were called up, the voting qualification was secured by stock worth £250. Hunter, *A history of British India,* 11, 135.
14 Court Book, 22-27 June ^59, vol. 28; *ibid.,* 25 June 1662, vol. 28; *ibid.,* 20 April 1666, vol. 28; *ibid.,* 6 July 1666, vol. 30; *ibid.,* 4 December 1666, vol. 30.
15 Scott, *Joint-stock companies,* 11, 130.
16 Despatch Book, 27 March 1661, vol. 86, p. 17; *Calendar of State Papers Domestic 1664—5,* P- 565-
17 Glamann, *Dutch Asiatic trade,* pp. 245-7.
18 Court Book, 12 December 1664, vol. 28; British Museum Additional Manuscript 17476, p. 194.
19 Scott, *Joint-stock companies,* 11, 132.
20 Glamann, *Dutch Asiatic trade,* Tables 59-60, p. 247.
21 John Hough ton, *A collection for improvement of husbandry and trade* (1692-1703); John Castaing, *The course of the exchange and other things.* For the mechanism of foreign exchange, see the correspondence between Robert Blackborne, the Secretary of the East India Company, and various Amsterdam bankers, 1697-8, in Home Miscellaneous Series, vol. 36, pp. 284-321.
22 Hough ton, *A collection for improvement of husbandry and trade,* 7 July 1693, quoted by Dickson, *The financial revolution,* p. 487.
23 Violet Barbour, *Capitalism in Amsterdam in the seventeenth century* (Baltimore, 1950), pp. 74-84.
24 [Daniel Defoe], *The anatomy of exchange-alley: or, a system of stock jobbing* (London, 1719), pp. 13-14.
25 J. G. van Dillen, 'Isaac Le Maire et le commerce des actions de la Compagnie des Indes Orientales', *Revue d'Histoire Moderne,* 10 (1935), 1-25, 121-37.
26 Josef Penso de la Vega, *Confusion de confusiones: dialogos curiosos entre un philosopho agudo, un mercador discreto y un accionista erudito, descriviendo el negocio de las acciones* (Amsterdam, 1688). Dutch translation and edition by M. F. J. Smith and G. J. Greer, (The Hague, 1939); English edition by H. Kellenbenz (Cambridge, Mass., 1957).
27 Scott, *Joint-stock companies,* 11, 177-9.
28 The total quantity of burnt pepper was 551 534 lb., Ledger Book 1664-9 (L/AG/1/1/2-3).
29 Scott, *Joint-stock companies,* 11, 134.
30 Court Book, 5 May 1671, vol. 31, p. 120.
31 *Ibid.,* 11 September 1672, vol. 32, pp. 41-2.
32 *Ibid.,* 1 October 1679, vol. 35, p. 157.
33 *Ibid.,* 21 October 1685, vol. 38, p. 151.
34 *Ibid.,* 2 October 1689, vol. 39, p. 226.
35 *Ibid.,* 12 January 1683, vol. 37, p. 99.
36 Bodleian Library, Rawlinson MSS. A 302, p. 230.
37 Court Book, 26 March 1679, vol. 35, p. 97. For the valuation of 1671 and 1678, see Home Miscellaneous Series, vol. 4, p. 12, Court Book, vol. 35, pp. 20-1.
38 *Ibid.*
39 Scott, *Joint-stock companies,* 11, 139; Court Book, 26 March 1679, vol. 35, p. 97.
40 Court Book, 27 March 1679, vol. 35, p. 98.
41 *Ibid.*
42 *Ibid.,* 15 April 1679, vol. 35, p. 105.
43 *Ibid.,* 29 November 1678, vol. 35, p. 59; *ibid.,* 23 July 1679, vol. 35, p. 120.
44 K. G. Davies, 'Joint-stock investment in the later seventeenth century', *Economic History Review,* 2nd series, 4 (1952), 283-301.
45 *Britannia Languens,* in McCulloch, *Early English tracts,* p. 453.
46 Court Book, 5 October 1681, vol. 36, p. 164.
47 Scott, *Joint-stock companies,* 11, 143.
48 *A treatise wherein is demonstrated that the East India trade is the most national of all foreign trades,* p. 10. William Letwin does not accept the general contemporary and modern view that it was the work of Sir Josia Child. See Letwin, *The origins of scientific economics,* Appendix 1, pp. 234-6. The most plausible explanation of the inconsistencies in the *Treatise* seems to

be that it was commissioned by the East India Company and incorporated the opinions and writings of the leading members of the Court of Committees.

49 *A treatise wherein is demonstrated,* p. 11.
50 Court Book, 2 November 1681, vol. 36, p. 171.
51 *Ibid.,* 18 January 1682, vol. 36, p. 187.
52 Bodleian Library, Rawlinson MSS. A 302, p. 230.
53 Scott, *Joint-stock companies,* 11, 146.
54 Court Book, 10 October 1683, vol. 37, p. 190.
55 Despatch Book, 13 January 1685, vol. 90, p. 426.
56 Court Book, 4 January 1683, vol. 37, pp. 97-8.
57 *Ibid.,* 29 December 1682, vol. 37, p. 97.
58 *Ibid.,* 12 January 1683, vol. 37, p. 99; *ibid.,* 24january 1683, vol. 37, p. 101.
59 *Ibid.,* 25 May 1683, vol. 37, p. 145.
60 *Ibid.,* 3 September 1684, vol. 38, p. 20.
61 Sir Benjamin Bathurst was nominated to act on behalf of James II. Court Book, 30 April 1684, vol. 38, p. 2. James IPs holdings were transferred to William and Mary by a decree of the Court of Exchequer in October 1691. Court Book, 2 October 1691, vol. 40, p. 74.
62 Scott, *Joint-stock companies,* 11, 152.
63 Court Book, 6 December 1689, vol. 39, p. 234.
64 *Ibid.,* 22 December 1691, vol. 40, p. 93.
65 '*Propositions for Regulating the East India Company', An account of some transactions in the Hon. House of Commons . . . relating to the late East India Company together with the said Companies new charter,* 1693, *India Office Tracts,* vol. 268.
66 *Ibid.*
67 For the Company's answer to the charge, see 'The humble answer . . . of the East India Company', 28 May 1692, *India Office Tracts,* vol. 268.
68 Court Book, 18 March 1692, vol. 40, p. 104.
69 'The humble answer . . . of the East India Company', *India Office Tracts,* vol. 268.
70 Somer's *Tracts,* x, 625, quoted by Scott, *Joint-stock companies,* 11, 155.
71 The tax was imposed by 4 & 5 Will. & Mary *c.* 14.
72 Court Book, 1 o November 1693, vol. 40, p. 214.
73 *Ibid.,* 12 January 1694, vol. 40, p. 227; *ibid.,* 30 October 1695, vol. 41, p. 35.
74 The effects of the war on English foreign trade are discussed in D. W. Jones, 'London merchants and the crisis of the 1690s', in Clark, Peter and Slack, Paul, ed., *Crisis and order in English towns 1500-1700* (London, 1972).
75 Houghton, *A collection for improvement of husbandry and trade,* 15 June 1694, quoted by Dickson, *The financial revolution,* p. 486.
76 Grassby, 'The rate of profit', pp. 740-1; Davies, 'Joint-stock investment', p. 287.
77 Josia Child, *A new discourse of trade,* ch. 1, p. 22.
78 The rate of return is calculated from the actual dividends paid and it does not include the stock bonus of 100 per cent issued in 1682.
79 The figures given here are different from those given by Grassby, but these support his general conclusion that the long-term trend in the seventeenth century for profits was a declining one. See Grassby, 'The rate of profits', pp. 732-6.
80 *An exact collection of the debates and proceedings in Parliament in 1694 and 1695 upon the inquiry into the late briberies and corrupt practices,* 1695, *India Office Tracts,* vol. 268.
81 Court Book, 5 July 1698, vol. 41, p. 289.
82 Despatch Book, 26 August 1698, vol. 93, para. 12, p. 102.
83 Court Book, 24 April 1700, vol. 43, p. 129.
84 *Ibid.,* 13 November 1699, vol. 43, p. 99. The General Court sanctioned only a call of 20 per cent, *ibid.,* 17 November 1699, v°l« 43? P» 101 •
85 Despatch Book, 20 December 1699, vol. 93, para. 33, p. 253.
86 Court Book, 17 April 1700, vol. 43, p. 127; *ibid.,* 24 April 1700, vol. 43, p. 129.
87 *A letter to a member of Parliament,* 1701.
88 The negotiations leading to the merger and the union are to be found in 'Papers relating to the Union of the Companies', Court Book, vol. 50A, 1706-8; Bodleian Library, Rawlinson MSS. A 302.
89 *Despatches from England 1701-1706 (Fort St. George),* 6 March 1702, para. 65, p. 28.

90 6 Anne, *c.* 17.
91 Despatch Book, 9 April 1709, vol. 96, para. 110, p. 239.
92 Court Book, 20 June 1716, vol. 54, p. 57.
93 Another conclusion is the difference between actual profits and the dividend rates.
94 Court Book, 8 June 1711, vol. 51, pp. 461-2.
95 Scott was wrong in stating that no dividend was paid in 1711-12. His figures, taken from the general statements made in the meetings of the Court of Directors, do not agree with the Ledger Books. Scott, *Joint-stock companies,* 11, 201.
96 It is not known where and in what form the reserves were kept. Sometimes the Company's bullion was deposited with the Bank of England and appeared as a credit transaction in the account books. There is no information on the Company's holding of paper money or other credit instruments.
97 A. Anderson, *An historical and chronological deduction of the origin of commerce* (3 vols., London, 1787), m, 245, quoted by D. M. Joslin, 'London bankers in wartime 1739-84', in L. S. Pressnell, ed., *Studies in the Industrial Revolution* (London, i960).
98 [Sir Robert Walpole], *Some considerations concerning the publick funds, the publick revenues, and the annual supplies granted by Parliament* (London, 1735, p. 31).
99 Dickson, *The financial revolution,* p. 22. On the French speculation, see J. Vilain, 'Heurs et malheurs de la spéculation (1716-1722)', *Revue d'Histoire Moderne et Contemporaine,* N. S. 4 (1957), 121-40; Scott, *Joint-stock companies,* 1, 401-3.
100 Court Book, 23 March 1715, vol. 53, p. 309; the proposal was first made by the Committee of the Treasury in December 1714, *ibid.,* 17 December 1714, vol. 53, p. 225.
101 *Ibid.,* 17 September 1715, vol. 53, p. 430.
102 *Ibid.,* I4june 1716, vol. 54, p. 52; *ibid.,* 21 February 1717, vol. 54, p. 583.
103 Dickson, *The financial revolution,* p. 84.
104 Guildhall Library, Radcliffe-Delme Papers, Letter dated 2 April 1717, from Chitty & Son, quoted by John, 'Insurance investment and the London money market', p. 140.
105 Court Book, 9 November 1720, vol. 56, p. 151.
106 *Ibid.,* 26 May 1714, vol. 53, p. 30; *ibid.,* 27 August 1714, vol. 53, p. 117; *ibid.,* 17 September 1714, vol. 53, p. 136.
107 Wilson, *Anglo-Dutch commerce,* p. 97.
108 Dickson, *The financial revolution, p.* 151.
109 Despatch Book, 24 February 1721, vol. 100, para. 77, p. 520-1.
no Court Book, 15 February 1721, vol. 56, p. 260.
111 *Ibid.,* 22 March 1721, vol. 56, pp. 289-90.
112 The rate was raised again to 5 per cent in 1726-8. Between 1728-33 it was 4 per cent; between 1733-7 3.5 per cent; and 1737-46 3 per cent. See Dickson, *The financial revolution,* Table 67, p. 411.
113 Despatch Book, 12 March 1731, vol. 105, para. 71, p. 242. The payment of £2ooooo to the Crown appears in our Table A.25, under col. 1.
114 See Chapter 12, p. 298.
115 Robert Adams to Stephen Law, 8 June 1732, Private Correspondence of Robert Adams, Home Miscellaneous Series, vol. 37, p. 153.
116 'The speeches made at the General Court of the East India Company on Wednesday, August 9th 1732', Memoranda of the Committee of Correspondence, vol. 100.
117 Miscellaneous Letters Received, 28 October 1736, vol. 27, No. 133.
118 [Sir Matthew Decker], *Serious considerations on the several high duties.*
119 Court Book, 13 September 1732, vol. 62, pp. 133-4; *ibid.,* 20 September 1732, vol. 62, pp.143-52.
120 *Ibid.,* 3 November 1732, vol. 62, p. 190.
121 [Sir Matthew Decker], *Serious considerations on the several high duties.*
122 Dickson, *The financial revolution,* p. 413.
123 General Court Book, 25 April 1750, vol. 256, pp. 163-71; Memoranda of the Committee of Correspondence, 25 April 1750, vol. 103. On Samson Gideon's operations, see L. S. Sutherland, 'Samson Gideon and the reduction of interest, 1749-50', *Economic History Review,* 16 (1946), 15-29.
124 LedgerBookI(L/AG/i/i/i9),p.88;^W.,K(L/AG/i/i/2o),p. 13.
125 Despatches to Bombay, 26 March 1755, vol. 996, para. 127, p. 253.
126 *Ibid.,* 25 April 1759, vol. 996, para. 156, pp. 771-2.

Chapter 19

1 *The Wealth of Nations,* vol. 1, bk rv, ch. 1, p. 446.
2 *Ibid.,* vol. 1, bk iv, ch. 1, p. 448.
3 K. N. Chaudhuri, *The English East India Company,* p. 43.
4 Despatch Book, 9 June 1686, vol. 91, pp. 142, 145.
5 See Chapter 6, p. 112. In 1713 the Court of Directors ordered the Madras Council to discourage the settlement of Muslims in the town, as they were prone to appeal to the Mughal rulers for justice. The Madras officials replied that all Muslim inhabitants who did so in future would be expelled from the colony. See *Despatches from England 1710-1713 {Fort George),* 2 February 1713, para. 130, p. 84; *Despatches to England 1711-1714 {Fort St. George),* 13 September 1713, para. 114, p. 146.

Appendix 2

1 M. G. Kendall and A. Stuart, *The advanced theory of statistics,* 2nd edn (3 vols., London, 1968), in, 378.
2 *Ibid.,* in, 417-18.
3 G. E. P. Box and G. M. Jenkins, *Time series analysis: forecasting and control* (San Francisco, I97O). P. 59-

Appendix 3

1 Despatch Book, 27 February 1719, vol. 99, para. 34, p. 675.
2 *Ibid.,* 1 December 1725, vol. 103, para. 43, p. 77.
3 *Ibid.,* 9 April 1708, vol. 96, para. 46, p. 223.
4 *Despatches from England 1715-1718 {Fort St. George),* 30 October 1717, paras. 8-9, p. 96.
5 Despatch Book, 3 February 1720, vol. 100, para. 6, p. 215.

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